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ABSTRACT

Seven New York City urban education programs were evaluated under the direction of the state urban education coordinator, and the evaluation reports on those programs are included here. The seven programs are: Strengthening Basic Skills in the Junior High School, Reading Diagnostic Centers, Multi-Sensory Stations, Guidance Interim Class, Bilingual Bicultural Program, Living Science Center, and Developmental Program in Personnel and Curriculum. Each report consists of sections on program objectives, evaluation objectives and procedures, program implementation, program effectiveness, and recommendations. Tables are included. (MS)

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FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
Harry N. Rivlin, Dean

# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

# DISTRICT 10, NEW YORK CITY, BOARD OF EDUCATION

1970–1971 SCHOOL YEAR

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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**An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).**

**INSTITUTE FOR RESEARCH AND EVALUATION**

**Joseph Justman, Director**

**June 1971**

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FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
HARRY N. RIVLIN, DEAN

# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## 1970-1971 SCHOOL YEAR

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INSTITUTE FOR RESEARCH AND EVALUATION

JOSEPH JUSTMAN, DIRECTOR



June 1971

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A long list of representatives of the schools in District 10 contributed to the findings presented in these reports; District Coordinators, Program Coordinators, Principals, Teachers, Paraprofessionals, and Students. To all of them, our gratitude for their patience and cooperation.

The Evaluation Team

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FORDHAM UNIVERSITY
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Function No. 51-1-6451

# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "ADMINISTRATIVE COMPONENT"

Prepared by

PAUL SCHWEITZER
Evaluation Director

An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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INSTITUTE FOR RESEARCH AND EVALUATION

JOSEPH JUSTMAN, DIRECTOR

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June 1971

# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

# DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "ADMINISTRATIVE COMPONENT"

## I. INTRODUCTION

The Coordinator of the State Urban Education Program in District 10 has been assigned the responsibility of working with the Community Advisory Committee and with the Community Superintendent and his staff in developing, coordinating, and evaluating seven State Urban Education projects in the district. These projects include the following:

1. Strengthening Basic Skills in the Junior High School
2. Reading Diagnostic Centers
3. Multi-Sensory Stations
4. Guidance Interim Class
5. Bilingual Bicultural Program
6. Living Science Center
7. Developmental Program in Personnel and Curriculum

## II. PROGRAM OBJECTIVES

The following program objectives were cited by the District in the request for funding that was submitted:

A. Administrative Component

1. To provide personnel and services for the planning, implementation, and supervision of all State Urban Education Programs.

2. To provide for the coordination of activities of all participating groups (professional staff, participating schools, community groups, vendors, and central Board of Education personnel).

## III. EVALUATION OBJECTIVES AND PROCEDURES

The objectives of the evaluative study that was undertaken paralleled the program objectives, and may be summarized as follows:

1. Determination of the extent to which personnel and services were provided for planning, implementation, supervision, and coordination of the program.

2. Determination of the adequacy of personnel and services in planning, implemen ation, supervision, and coordination of the program.

The procedures utilized in this evaluation of the Administrative Component included:

1. Interviews with the Community Superintendent, the Title I Coordinator and members of her staff, project directors, other District personnel, and program evaluators with regard to personnel and services.

2. Analysis of program and personnel records.

3. Analysis of communications from the Title I office to District personnel.

## IV. IMPLEMENTATION OF THE PROGRAM

In anticipation of the allocation of funds for the District program, the Coordinator met with the Community Advisory Committee as early as February, 1970, long before the June date when preliminary word concerning funding was received. The Committee was divided into several working subgroups, so that each school participating in existing programs could be visited by at least one committee member. The observations made by committee members entered into the decision concerning recycling and possible modification of programs in operation.

The Committee then held a meeting to determine priorities. This meeting was attended by members of the professional staff in the schools, by lay people in the community, and by members of the District office staff. Interim evaluation reports from the Fordham University Institute for Research and Evaluation were available and were utilized in arriving at a program for the current year.

The Coordinator participated in all these meetings. Indeed, she was on duty in District headquarters until August 17, 1970 and was available for the remainder of the summer for consultation and to confer with the State Education Department officials in Albany and New York City concerning program approval. As a result of her efforts over the summer vacation period, all programs in District 10 started on the first day of school.

In the implementation of the program, the Coordinator, working in conjunction with the project directors, found it necessary to modify several of the programs that had been planned:

1. The Bilingual Bicultural Program was modified by the addition of four teachers of English as a second language. This addition was based on a report by the project coordinator, who found that the needs were greater than had originally been anticipated.

2. The Reading Diagnostic Center was extended to another school, based on the needs of the school.

3. The Multi-Sensory Stations were extended to two additional schools, based on the needs of those two schools.

4. Purchases for the Learning Resource Center were modified to provide more materials for Black and Puerto Rican Studies, for which a need became apparent.

These and other changes necessitated modification of the budget for the State Urban Education Programs in the District. Some of the budget allocations that were modified are given below, as examples of the way in which the Coordinator solved the problem of providing services, as the need for such services became apparent:

1. Strengthening Basic Skills - provide additional hours for educational assistants, hus making possible more individualized and small group instruction ($8,167).

2. Multi-Sensory Stations - provide additional hours for educational assistants in original schools ($6,081); establish new units of existing program in three schools where an analysis of Metropolitan Achievement Test Scores indicated that approximately 300 pupils were in need of remediation in reading ($23,089).

3. Bilingual Bicultural Program - increase hours of service of educational assistants to permit more individualized and small group instruction ($11,254); extend services to approximately 500 additional pupils in eight schools, due to rapid increase of non-English speaking pupils in the District ($71,316); reduce hours of Teachers of English as a Second Language due to difficulties in recruitment, add two educational assistants to provide services to children (-$8,138).

4. Reading Diagnostic Center - provide additional personnel, supplies, and equipment to work with increased number of non-readers ($16,569).

5. Developmental Program in Curriculum - provide additional multi-media learning materials related to minority cultures, in response to expressions of need voiced by teachers, supervisors, curriculum specialists, and parent and community groups ($22,156).

6. Youth Audiences - establishment of new unit ($5,513).

In addition to these budget modifications, all of which grew out of needs that became manifest as the particular program became operative, additional modifications were necessary to adjust teacher and paraprofessional salaries to reflect changes in salary and fringe benefits during the course of the program. The volume of work engendered by these modifications and the need to ensure that all record-keeping, including verification of receipt of materials shipped to schools for all State Urban Education programs, preparation of O.D. 14's and requisitions for payment of all materials received, payment of bills for all items under $50, and complete accounting for all imprest funds for all State Urban Education programs, made it necessary to increase the allotment of secretarial service for the Coordinator's office.

## V. EFFECTIVENESS OF PROGRAM ACTIVITIES

The Coordinator maintained excellent communication with all individuals and groups involved in the program. For example, each principal of a school participating in a current project received a copy of the previous year's evaluation report, with a cover letter asking him to be prepared to meet with the Community Superintendent to discuss the implementation of such recommendations as were made. She met with the personnel assigned to each of the seven current projects at the onset of the program, and held further meetings during the course of the year.

Every program coordinator received a copy of the Interim Evaluation Report, with the request that the coordinator return a statement indicating his reactions to the report.

The Coordinator established an excellent system or record-keeping for all phases of the State Urban Education Program in operation in this district. These records included:

1. A schematic chart of progress for each schocl in the program
2. A file for every person employed in the program
3. A file of modifications of programs
4. A file of instructions to personnel
5. A record of each pupil participating in each program is to be established at each school
6. A payroll by program for each paraprofessional working in the program, with subtotals for each payroll period, which can be checked against total allocation for the program
7. Time sheets signed by each professional and paraprofessional, and counter-signed by the respective school principal
8. Monthly progress reports from each project coordinator.
9. Line-by-line coding of supplies, including the total allocation and the amount ordered. When the school sends the packing slip it is matched with the original invoice, the original requisition, and a copy of the order letter. An OD 14 is then prepared and sent to the Board of Education.

## VI. SUMMARY

It is evident that the projects in District 10 were carefully planned to meet the needs of the community and its children. Surveys were conducted to examine the extent to which the needs were being met; where the findings indicated, the Coordinator was instrumental in initiating needed modifications.

In the opinion of the evaluator, the Coordinator of the State Urban Education Program in District 10 is doing a superb job. One may single out for special commendation the following administrative practices:

1. Her anticipation of possible difficulties and her planning and prompt action in utilizing resources to solve problems as they arise;
2. Her establishment of a comprehensive, practical, and effective system of record-keeping; the files are models of orderly organization, with such refinements as ingenious color coding of all folders to make it simple to find information quickly;
3. Her effective system of communication between all levels and groups involved in the programs;
4. The efficiency with which necessary changes and modifications were proposed, approved, and implemented in conjunction with program coordinators and in response to observed needs in changing situations.

FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
HARRY N. RIVLIN, DEAN

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Function No. 51-1-6452

# AN EVALUATION OF STATE URBAN EDUCATION PROGRAMS

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "STRENGTHENING BASIC SKILLS IN THE JUNIOR HIGH SCHOOL"

Prepared by

ANNE BRAVO
Evaluation Director

An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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INSTITUTE FOR RESEARCH AND EVALUATION

JOSEPH JUSTMAN, DIRECTOR

Publication No. 71-66 June 1971

AN EVALUATION OF STATE URBAN EDUCATION PROGRAMS

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

"STRENGTHENING BASIC SKILLS IN THE JUNIOR HIGH SCHOOL"

## I. INTRODUCTION

This program, designed to strengthen basic skills in reading and mathematics in the junior high school, operated in two separate components during the 1969-1970 school year, and was recycled for the 1970-1971 school year. In the light of the evident success of the original program in strengthening reading skills, it was felt that the current year's program should explore the values of intensified guidance and corrective instruction in reading. It was also felt, on the basis of the evaluation during the previous year, that the program in mathematics had not achieved its full potential. The current recycling sought to eliminate the limitations in program operation noted in the earlier cycle.

In a sense, this project may be looked upon as having distinct mathematics and reading components. In mathematics, the program sought to motivate the under-achiever through the use of electric and hand operated calculators. Although the program was introduced in six of the junior high schools in the District, only four (J45, J80, J115, and J143) were utilized in this evaluation.

The reading component of the program utilized multi-media materials in a laboratory setting in an attempt to improve the skills of educationally disadvantaged pupils who were retarded in reading by at least two full years. Here, three (J45, J80, J143) of the six junior high schools in the District were utilized in this evaluation.

In all, approximately 1,400 pupils were to be serviced in this program. A full-time teacher was to be assigned as coordinator of the program. Ten educational assistants, working five hours per day for 184 days, were to assist classroom teachers by providing small group and individualized instruction.

## II. PROGRAM OBJECTIVES

The objectives of the program as cited in the request for funding submitted by the district, were stated as follows:

1. To provide diagnostic services in the basic skills of reading and mathematics.

2. To provide laboratory-types of learning environments for the remediation of diagnosed disabilities in learning reading and mathematics.

3. To accelerate the rate of growth in reading and mathematics of the participating students by an amount larger than achieved in the preceding year as measured by the Metropolitan Achievement Test.

4. To improve the attitude of participating children toward attendance and achievement.

## III. EVALUATION PROCEDURES

The evaluator has observed the mathematics program in Junior High Schools 45, 115, 80, and 143 and the reading program in Junior High Schools 45, 143, and 80. Conferences were held with the project director, school supervisors in charge of the mathematics program, teachers in the program, and the educational assistants to discuss the children's progress, their attitude and enthusiasm. Teacher planning, based on their students' needs as shown by diagnostic tests was also considered.

Sample student work folders were examined to assess student progress. Visits were made with the project coordinator for the purpose of developing further insight into the teachers' immediate needs.

Questionnaires were submitted to the teachers and educational assistants in the program to obtain their evaluation and suggestions, based on their classroom experiences.

Children were interviewed to discover how they felt about the program; how they saw their own improvement, and what they considered to be most helpful to themselves or other children in the program.

Metropolitan Achievement Test scores were obtained for a sample of the children; these were compared with their scores of the previous year.

## IV. PROGRAM IMPLEMENTATION: MATHEMATICS

Observation of the program in action in the various schools made it clear that last year's recommendations and the recommendations in this year's interim report were being implemented to varying degreees. Some of the obstacles to the implementation of the program were still operative, such as mobility of personnel, shortage of physical space, delay in repairs of materials.

### Organization of Classes

There has been considerable change in the structure and organization of the remedial mathematics classes since the program was first introduced. Since the administrators and supervisors were intent on servicing the children according to their needs, the structure has undergone changes.

Program administrators did not hesitate to try new approaches to class organization. In addition, some personnel were dropped and others added; some teachers were asked to divide their time between regular math and remedial math, while others were assigned exclusively to remeidal basic skills in mathematics. An indication of the varied approaches to class organization is given in the following list:

| Grade | Assignment For Strengthening Basic Skills |
|---|---|
| 7 | One half class plus EA with Remedial teacher, one half class with class teacher for math. Class alternated |
| 7 | Two remedial math teachers divide class in half, each takes 9 children |
| 7 | Four classes, once a week, 21 children in each class |
| 7 | Two classes, twice a day |
| 8 | All eighth graders given a session in basic skills Class size 30-32. |
| 8 | Slowest class, 23 in group |
| 9 | Slowest class, 21 in group |
| 9 | Slowest Children, 23 in group |

It is evident that administrators are experimenting with various structures.

Approaches to Instruction

Teaching styles varied within a school and also within the grade. The most frequent approach to the remedial mathematics session was the use of a daily mimeographed worksheet which was given to every member of the class. The student was expected to solve the problems which consisted of drill in the four basic operations and a few problems. When the students solved the problems they checked their work with the teacher or educational assistant; then they checked it again on the calculator.

During the period while the students were working both the teacher and the educational assistant tried to get to every child to answer questions, to check the work, and to clarify children's errors.

While some effort was made to include practical problems such as "Bus tokens cost $.30 each. How many tokens can you buy for $2.00?," very frequently children were confronted with 16 examples such as

$$\begin{array}{r} 33174 \\ -\ 27287 \\ \hline \end{array}$$

When the children completed all of them they checked with either adult and obtained a calculator for a final check of their work.

It was clearly evident that the children enjoyed checking their work on the calculator. The negative aspect of this approach was that success came to those who knew their tables and could work resonably fast. For those who were slow, for those who used delay tactics to avoid work they found tedious, and for those who recognized their handicap, the period was not rewarding.

A second approach was the use of an instruction sheet to illustrate the steps in using the calculator for a new operation. The teacher explained the process to the class; working with them step by step, she then put a few practical examples on the board, and checked each one as children worked the calculator. This type of approach to a new topic held the interest and enthusiasm of the whole class. It was clearly evident that children were curious; they did want to learn something new and they were willing and able to listen when useful information was being given to them.

A third approach may be described as a "whole class" method. The teacher introduced a topic found in the Junior High curriculum and an attempt was made to instruct all the students. For example, a teacher put a realistic problem concerning taxes of Muhammed Ali on the board.

The children were interested in his take-home pay and the government's portion.

Another type of lesson presented to the whole class was based on quick drill on multiplication tables. The children involved in this speed drill knew what they missed on the last test and they were encouraged to become perfect. They enjoyed the challenge and were anxious to test their skill.

In another approach, the teacher distributed a 17 page diagnostic work booklet with graded examples in the four basic operations. This excellent booklet was designed by one of the teachers for the purpose of detecting specific needs and for correcting them. This booklet was to have been used at least once a week, so that in 17 to 20 weeks both teacher and student could measure growth and progress. If a child were seriously handicapped more time might be necessary, because he could not go on to another page until he had learned how to solve the preceding problems. In one class, this booklet was carefully checked and progress was noted. It was used systematically as a change from other math work. In another class, correction was not systematic, entries were sporadic, and the pupils work was poor. Random sampling in April showed that the last entry was made in Feb. 4 and the one before that was made on Jan. 26.

The use of S.R.A. Computional Skills materials constituted still another approach. The child took a weekly diagnostic test. If errors were made, he was given an appropriate correction card. This correction card diagnosed his errors and supplied examples related to these errors. When his practice was adequate he was given a Progress test related to the error. Having passed that test, the child could move to the next higher level. The children so observed worked in close quarters but the professional attitude of the teacher created an atmosphere in which

students seemed to be racing against time .... time to get to another card .... time for another test .... time for another advancement! There was no time for clowning, copying, or slipshod work. There was just time for fun and fast accomplishment.

In another approach, the teacher administered a diagnostic test and then used the examples the children had missed as a guide for helping them. The children worked the examples they missed on the calculator. The teacher and the educational assistant worked with the children on a one-to-one basis.

In another mode of instruction, the regular teacher of mathematics came to the remedial class with the entire group (30) and the three adults each worked with about 10 children. In a variation of this technique, the mathematics teacher kept half the class and presented material on their grade level while the second half went for remedial help to the special laboratory and worked with the remedial teacher and the educational assistant. On other days the procedure was reversed, so that all children had an opportunity to get both intensive remedial help and grade level instruction.

Still another variant of small group instruction was one in which the class was divided in half. The teacher worked with nine children in one group and the educational assistant worked with nine in another part of the room. All worked efficiently.

In a unique approach, the teacher gave the entire class a triple assignment. He distributed a diagnostic work booklet which had been begun by the students in the fall, a drill work sheet with examples in addition, subtraction and multiplication also examples using pounds and ounces and the reduction of fractions. The third sheet was for practice in Egyptian, Chinese and Hindu-Arabic numeration. He then told the class

that those who had made little progress in the booklet should work on that while the others could work on the three tasks in any order they wished. The teacher and the educational assistant went around the room helping children with their assignment.

Children Serviced

The problems involved in organizing instruction in this program may be seen when one considers the range of pupil differences in a single class. The distribution of scores obtained on the Metropolitan Arithmetic Test by the pupils in three typical groups are summarized in Table 1.

TABLE 1

Distribution of Scores on Metropolitan Arithmetic Test for Three Typical Groups

| Grade Level | Group A (7th Grade) | | Group B (8th Grade) | | Group C (9th Grade) | |
|---|---|---|---|---|---|---|
| | Concepts | Problems | Concepts | Problems | Concepts | Problems |
| 8 | 2 | | | | | 1 |
| 7 | | 2 | 2 | 2 | 2 | 1 |
| 6 | | | 2 | 1 | 2 | 2 |
| 5 | 1 | | 2 | 3 | | |
| 4 | | 1 | 2 | 1 | 1 | |
| 3 | 3 | 2 | | 3 | 2 | 1 |
| 2 | 1 | 2 | 1 | | | 1 |
| 1 | 1 | 1 | 3 | 2 | 1 | 2 |

A sample of 172 children in the eighth and ninth grades were drawn, and their average achivement on the Metropolitan Achievement Test was checked on entrance to the program. These data are summarized in Table 2.

TABLE 2

Achievement Level of Sample of 8th and 9th Grade Pupils Participating in Program

| | | Achievement Level | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade | N | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
| 9 | 97 | 3 | 1 | 7 | 5 | 25 | 38 | 12 | 5 | 1 |
| 8 | 75 | 2 | | 1 | 5 | 5 | 20 | 20 | 14 | 8 |
| Total | 172 | 5 | 1 | 8 | 10 | 30 | 58 | 32 | 19 | 9 |

Of the 172 pupils, only 7 were working at or above grade level, and only 12 were functioning within one year of grade level. Not only was retardation a very serious problem, but the children on a given grade level showed a very wide range of ability. With very few exceptions, it is quite clear that the children selected for the program were well below grade level.

## V. PROGRAM EFFECTIVENESS: MATHEMATICS

The Teacher. Teachers participating in the mathematics program showed a wide range of experience; they reported previous experience ranging from zero to thirteen years. Those with previous experience had taught from the sixth to the ninth grade. None of the teachers reported previous experience below the sixth grade level, although they were dealing with children functioning well below grade who needed development of skills and concepts normally introduced at the elementary school level.

It is not surprising, then, that observation revealed that the teachers showed considerable variation in teaching effectiveness. While the observer was impressed by the professional zeal and interest of the staff, it was evident that instruction directed to the total class group was much too common. Some teachers apparently did not realize that total class instruction is of little value when the pupils show a range of ability from second to eighth grade, and that differentiated instruction was necessary. For example, in one class of 21, 7 children were inattentive during the presentation of new material; in another class of 20, 4 children were apparently day-dreaming, one was reading a book, and one was busily engaged in writing in a notebook while the teacher explained a new process. In both of these classes, the material presented was much above the level of many of the pupils, and they simply "tuned out."

In other instances, teachers apparently failed to realize that pupils were obtaining correct answers by counting on their fingers, that pupils had not mastered the process called for in solution of a problem that had been presented, or that students were very happily copying from their neighbors instead of working independently.

In some instances, the checking of independent work by children was neglected. In one child's folder, only 5 of 12 worksheets had been corrected; in another, all of 14 had been checked. One child had completed only 5 worksheets, while others in the same group had completed 18.

At times, in larger classes, discipline became a problem. The slower children used many delaying tactics to avoid involvement. They sought diversions from the tasks set for them. They called out, disregarded the directions of the teacher, and did their best to distract their classmates who were willing to work. It must be emphasized, however, that this disruptive behavior was not at all evident in smaller groups, where the teacher and educational assistant were able to set up a program of individualized instruction.

While these observations tend to stress some obvious problems, it should be noted that by far the larger proportion of the teachers could be looked upon as doing a "good" or "very good" job of diagnosis and remediation, while a small number could be considered "excellent." It was very evident that the teachers realized that much of the retardation shown by their pupils could be attributed to psychological problems. Thus, in response to a question asking them to list the most basic needs of their pupils, the stress was placed not on their weaknesses in fundamentals, but rather on their needs for success experiences, for individual attention as an ego-builder, for understanding by the teacher.

In general, the teachers felt that the program, as presently organized, had tremendous value. While they felt that classes were too large for effective individual work, and that more calculators should

be available, it is important to note that many of them looked upon the calculator as a "gimmick for motivating children," and that teacher's attitude was far more important than the materials provided. They felt that the program, in making it possible to let each student work at his own level, to give more attention to the slow child, and to give some children a feeling of success, perhaps for the first time, had made a tremendous contribution. The highly favorable reaction of the teachers is seen in their evaluation of the effect of the program in improving performance of children. Teachers who responded to this question indicated that the program had had considerable impact on 190 (47.7%) of the pupils; some impact on 126 (31.6%) of the pupils, and little impact on 82 (20.7%) of the pupils.

The major element contributing to the success of the program, insofar as the teachers were concerned, was the individualized instruction that could be offered. It is not surprising, then, that when asked for suggestions for program improvement, they suggested organization of smaller groups and provision for additional teachers and paraprofessionals. They felt, too, that supplementary help should be provided for the pupils, with the most frequent suggestion calling for tutoring by a high school student aide.

The Paraprofessional. By far the most important element contributing to the success of this program was the work of the paraprofessional in teaching individual and small groups of children. Their work was characterized by efficiency. They established excellent rapport with teachers and children; it was evident that both teacher and children had great affection and respect for their help. The image that they brought into

the classroom of a member of the community devoted to helping children added much to the program. Their dedication was visible in every contact they had with children.

In spite of the fact that their work in the program was considered highly effective, many of them felt that the program could do even more. Many of them voiced the opinion that more individualized work with children was needed, and that organization of smaller groups would make it possible to do an even better job of helping pupils.

They showed considerable insight into the needs of the children for support from an interested adult. While they felt that the program of diagnosis made it possible to concentrate on pupil weaknesses, they recognized that providing an experience of success was the most important contribution that they could make to the program.

The Children. The children who came to the remediation class were a difficult group to work with. They came to the group with a history of seven or eight years of frustration and failure. They were anxious, and many of them attempted to hide their anxiety by clowining, delaying tactics, overplaying their slowness, tuning out the teacher, and withdrawal from the work at hand. Negative feelings were readily expressed: "I don't like math. It's my worst subject." "If I don't want to take math, do I have to? I'd rather have gym or typing than math." "I'm no good at math."

Although these comments were expressed in interviews with the children, all but a small proportion of the pupils expressed satisfaction with their progress in the program. The following comments are typical:

"You can add faster on the calculator; it gives you the answer and if you are wrong you can figure why."

"I understand my work more. Before I had problems in division I could do one place, two place but when it came to anything after that I just couldn't do it."

"Before I couldn't do division, now I know."

"When I came here I didn't know math tables. Now I know them, true."

"I like math now. Before it used to be boring."

"Yes. At first when I came I hated the idea. Then I realized I had trouble in addition because I wasn't accurate enough. So I started working and I'm doing rather well."

"Yes. Machines help children think faster."

While the judgment of the children concerning their progress was highly favorable, data from pre- and post-tests is much more indicative of growth. Table 3 presents a summary of the growth shown by the participating children from October 1970 to May 1971, for those children for whom complete test data were available.

TABLE 3

Mean Pre - and Post - Test Scores Attained by Participating Children

(Mathematics)

| | | Mean Scores | | |
|---|---|---|---|---|
| Grade | N | Pre-Test | Post-Test | Gain |
| 7 | 92 | 3.7 | 5.0 | 1.3 |
| 8 | 66 | 4.4 | 5.8 | 1.4 |
| 9 | 45 | 5.1 | 5.8 | 0.7 |

Pupil growth in grades 7 and 8 proved to be excellent. Although the pupils in these two grades were very retarded at the outset of the instructional period, they showed gains of 13 months in grade 7 and 14 months in grade 8 over the seven month period.

In grade 9, the average gain shown by the participating pupils was 7 months. Although far less spectacular than the growth shown in the other two grades, the improvement shown during the instruction period represented a higher rate of growth than that noted in their previous school careers.

It would appear, then, that the program was markedly successful in attaining its objective insofar as improvement in mathematics was concerned.

It is also of interest to determine the extent to which the program contributed to changes in attitudes to self and school. Teachers were asked to rate a sample of pupils in their classes on a series of items relating to attitudes to self and school, using a five point scale:

1. Has shown a markedly more positive attitude
2. Has shown a moderately more positive attitude
3. Has not shown any change in attitude
4. Has shown a moderately more negative attitude
5. Has shown a markedly more negative attitude

Table 4 presents a summary of the proportion of children in the sample that were judged to have shown either a moderately or markedly more positive attitude.

TABLE 4

Proportion of Children Participating in Program Judged to Have Shown Positive Change in Attitude

| Item | Proportion |
|---|---|
| A. Attitude to Self | |
| 1. Seems happy and relaxed | 71.4 |
| 2. Likes to try new things | 57.1 |
| 3. Works independently without needing undue attention | 64.3 |
| 4. Gets along well with classmates | 42.9 |
| 5. Seems to feel confident in his abilities | 64.3 |
| 6. Takes good care of dress and appearance | 57.1 |
| 7. Appears to take pride in his work | 57.1 |
| 8. Acts friendly and outgoing | 71.4 |
| 9. Reacts well to frustration | 57.1 |
| 10. Shows leadership qualities | 50.0 |
| B. Attitude Toward School | |
| 1. Cooperates with teachers and pupils in working on class problems or projects | 57.1 |
| 2. Accepts teacher assistance and criticism | 71.4 |
| 3. Completes classwork and homework assignments | 78.6 |
| 4. Attends school regularly, without excessive absence | 71.4 |
| 5. Controls inappropriate behavior | 64.3 |
| 6. Shows courtesy toward teachers and other adults, classmates | 57.1 |
| 7. Adjusts comfortably to limitations on his behavior | 57.1 |
| 8. Pays attention to classroom activities | 71.4 |
| 9. Appears to gain satisfaction from his work | 57.1 |
| 10. Participates enthusiastically in class activities | 50.0 |

Based upon the ratings assigned by the teachers, it is evident that the program was not completely successful in contributing to improvement of pupil attitudes to self and school. In only one instance, completing class and homework assignments, were 75 per cent of the students judged to have shown a positive change in attitude. In five other of the 20 characteristics rated, improvement was shown by slightly more than 70 per cent of the pupils in the sample.

By way of summary, some strengths and weaknesses of the program may be identified:

Strengths

1. The professional zeal of the supervisors, teachers and educational assistants.

The staff appeared to be determined to overcome obstacles, whether they were physical, such as renovations to a building which would have to be endured for two years, or the built-in obstacles that students brought to the mathematics class.

2. The calculator was a definite help to the teacher and the children. Children recognized that the calculator was an impersonal helper that didn't criticize or rate; it just pointed up errors or correct answers. The opportunity provided to correct their own errors without adult intervention was of particular importance, because, in their past experience, adult correction had not been effective. The children who came to class with deep-seated aversion to mathematics found the impersonal machine a welcome change from adult prodding. Many of them found ways to successful drill on their own time, at their own level, and at their own rate of speed.

The calculator helped create a laboratory environment and the students responded by making good use of the machines. The most disruptive child did not vent his anger on the machine. In fact, many of the most "acting-out" of the children became the "speed artists," and learned how to use the machine efficiently.

Children whose penmanship was poor saw correct figures in constant perfect form and alignment; this helped them to see the basic order in figure formation and place value. Children who wrote laboriously and were hampered by their own slowness saw that they could develop finger dexterity and they took pride in their new speed. They learned to anticipate the answer that would appear and feel gleeful when it did appear. One child put it very aptly when he said, "When I check my work on the machine I know the answer is correct, but when I check it myself I'm still not sure."

The calculator provided an entry into the adult world. The student saw himself operating a machine currently used in the business world; even when he was performing very elementary operations, he felt that he was wearing an adult mantle.

3. The diagnostic services offered to children were also a basic strength of the program. The teachers in the program had at their disposal information about grade level of achievement and the specific errors made by their pupils. Teachers were enabled to prepare lessons based on specific needs, chart their pupils progress, and engage in such reteaching as was necessary.

4. The incomparable performance of the educational assistants was a major strength. Their efficient assistance convinced children that help was only a step away. The rapport between assistant and children was obvious; even the most disturbed responded to the educational assistants. The program simply could not have functioned without them. Any assignment given them was done well, whether it was tutoring, or checking work, or helping with machines or materials.

Weaknesses

1. Inadequate use of analytical data.

Students were given diagnostic tests, the information was carefully noted, and teachers knew specifically what the students needed. Yet, class after class was presented with a common work sheet for the entire group.

2. Lack of planning with children.

In no session was time given to the discussion of the progress made or to the next step to be taken at the next session. Each day appeared to be devoted to a new unit, based on another sheet and another set of examples. The units did not present a sequential continuum for any child or group. There appeared to be no time for the groups and the teacher to evaluate the day's progress. Day appeared to follow day with no pause between one day and the next to take stock.

3. Poor timing

In the larger groups, it frequently took children 10-15 minutes before they got down to work; often, they did not accomplish the day's assignment. The next day, a new assignment was distributed. Better timing of assignments to be completed within a session was needed.

## VI. PROGRAM IMPLEMENTATION: READING

In every class that was observed, the EDL and other materials needed for the session were ready before the children entered the room.

The size of groups varied from 4 to 16 children per teacher; as a consequence, approaches to instruction varied. In most instances, teachers and educational assistants both worked with small groups of children. The educational assistants generally handled the machines that were available, while the teacher worked with individual children or small groups. In all cases, educational assistants also worked with individual children.

In one instance, a large room was divided into two sections with two reading teachers and an educational assistant. The groups met on opposite sides of the room and each group worked without disturbing the other. Both teachers worked with machines, such as Controlled Reader and Aud-x, with the educational assistant working with individual children.

Adults observed, whether teachers or educational assistants, serviced no more than 10 children at a time. This meant that the children had ample opportunity to be heard and to be involved. They had many chances to speak and to clarify their contributions. This small intimate grouping created a highly professional atmosphere in which there was no semblance of disorder, although lively conversation predominated and humor was not frowned upon. There was a definite competency about the children; they knew what was expected of them.

The contrast between a new entrant and children who had been in the class for one or two years was spectacular. The recent entrant fidgeted, fussed, made bodily movements, lost his place, tried to involve children into some overt response. The children with previous experience in the program accepted this behavior, and continued to work peacefully.

The lessons were planned to encourage conversation, thinking, imagination, identification with people or characters in a story. Students were encouraged to take a stand and defend their thinking.

There seemed to be concerted action, each student became involved in the topic of the day which the teacher presented in a stimulating way to start a flow of ideas. Realistic stories captured the children's interest. Opinions were suspended in the air like mystery thrillers ... no one was right, no one was wrong ... they had to wait and see how close they came to judging or anticipating the actions of the characters in the story.

The rooms were actually set up in laboratory style, machines such as the Aud-x, Tach-x, Controlled Reader, Tachistoscope, screen, earphones were at the children's disposal and in working order. Software such as workbooks, leaflets, worksheets, notebooks, were also readily available for immediate use.

The materials were challenging and the children had no time to seek inordinate attention; they were so engrossed in the lesson of the day. They accepted all aspects of the program in good spirit. If grammar were part of the lesson, then they took on grammar; if spelling rules had to be applied, they tackled them with approval. The children seemed determined to increase their speed in reading, following the controlled reader as if nothing else existed in the room. In short, attention and participation were on a very high level.

## VII. PROGRAM EFFECTIVENESS: READING

Observation of the program in action indicated that the instructional program was highly effective. The teachers involved in the program showed excellent command of all aspects of the classroom. Lessons were well planned and showed good gradation in the development of sequential skills. They recognized the importance of materials as a medium for development of skills, and the materials they selected for use with children had rich content and maximum appeal. They grouped children according to achievement level; the relatively short achievement span made it possible to provide each child with the specialized help he needed.

Because the groups with which the teachers and the educational assistants worked were small, there was close contact between adult and child. Rapport was extremely good; to the observer, the rapport between teacher, educational assistant, and child was one of the highlights of the program. This rapport was reflected in the motivation on the part of the children to achieve; discipline problems were few, and the teacher and educational assistant could spend all of their time in helping, rather than disciplining, children.

The dedication of the educational assistants was outstanding. All tasks to which they were assigned was accepted; all were performed efficiently. Their approach to the children was decidedly professional; their relationship to the children was characterized by warmth and understanding.

The reactions of the children who were interviewed are revealing of their feelings about the program. Some typical examples are quoted below:

"I'm learning more -- in the other classes they don't take time out for you."

"They tell us the new word -- how to pronounce it, and we learn. The teacher can't get to each kid if there's a lot of people in the class."

"Now I read more. I read about basket ball. It's kind of fun."

"I could do harder reading; this is so easy."

"Now I read at home. I go to the library."

"I never read comics before, Now I read jokes, riddles,I like harder books, they are OK."

"I used to be slow -- before. I Had no interest, now I have because the stories are more interesting. The best part is speed reading."

"I like the small number of children because the teacher can help."

"When I first started I read slow. I got mixed up. Not now!"

"I like it here -- but I still don't like reading -- it takes too long."

The teachers, too, felt that the performance of the children was good. In response to a question concerning improvement of their children, 120 (71.4%) were judged to have shown considerable improvement, 35 (20.7%) were rated as having made some improvement. Only 13 (7.9%) were considered to have made slight improvement.

Here, too, while the reactions of the children and the teachers to the program were very favorable, and both groups felt that the children had shown considerable growth in reading in the course of the program, a more adequate estimate of growth must take the form of an examination of pre - and post-test results. These are summarized in Table 5, for those pupils for whom complete data were available.

TABLE 5

Mean Pre - and Post - Test Scores Attained by Participating Children (Reading)

| | | Mean Scores | | |
|---|---|---|---|---|
| Grade | N | Pre-Test | Post-Test | Gain |
| 7 | 35 | 4.1 | 4.5 | 0.4 |
| 8 | 25 | 5.0 | 6.2 | 1.2 |
| 9 | 72 | 4.9 | 6.5 | 1.6 |

The mean growth shown by the children in grades 8 and 9 proved to be very high. In the 7 months that elapsed between initial and final tests, the pupils in grade 8 showed a gain of 12 months; those in grade 9, a gain of 16 months. In grade 7, however, the growth shown was disappointing. The pupils on this grade level gained an average of only 4 months. This failure to show greater growth bears out the observations of the teachers that a second year of participation in the program is needed for the child to show considerable growth.

In view of the small number of teachers participating in the reading aspect of the program, it was felt that an attempt to obtain teacher ratings of pupil growth in attitudes to self and school, limited as such judgments would have to be to a small number of pupils, would not give rise to data that would be meaningful.

## VIII. RECOMMENDATIONS

Both aspects of the program have demonstrated their effectiveness to a degree that warrants their continuation. Some recommendations are offered below for consideration by the District:

A. Mathematics

1. Establish a program of teacher and paraprofessional training stressing individualization of instruction, and use of remediation material specifically directed to the pupils' diagnosed weaknesses. At present, there is far too great a tendency to conduct whole-group instruction.

2. Explore the possibility of using student aides on a one-to-one basis with children.

3. Stress early identification of pupils who need help; enroll as many seventh grade pupils as possible in the program.

4. Provide for the sharing of materials of demonstrated value across classes and schools.

B. Reading

1. Stress early identification of pupils; enroll as many seventh grade pupils as possible in the program.

2. Provide a more complete diagnostic examination for pupils recommended for placement in the program; complete psychological and physical data should be available as the basis for development of a program for the child.

3. Provide for a greater degree of communication with the children's other teachers concerning the child's needs and progress.

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# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "READING DIAGNOSTIC CENTER"

Prepared by

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Evaluation Director

An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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INSTITUTE FOR RESEARCH AND EVALUATION

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EVALUATION OF STATE URBAN EDUCATION PROGRAMS

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

"READING DIAGNOSTIC CENTER"

## I. INTRODUCTION

In a self-assessment of reading progress and problems, District 10 of the Bronx came to two important realizations: first, that a sizeable proportion of its primary children were either severely retarded in reading or virtual non-readers by the end of their first year of schooling and, second, that their needs could not be adequately met in the regular classroom situation. It was felt that a more intensive and more individualized program was required to help these youngsters over the initial reading hurdle before retardation became compounded.

Since each school was not equipped in terms of space, teaching personnel, and materials to establish such intensive programs, it seemed logical to establish a centrally located district diagnostic and remedial center to service the children of several neighboring schools.

Bus transportation was arranged on a regular, continuing basis throughout the school year so that four neighboring district schools, in addition to the children from the "Center" school were serviced.

The original center, set up during the latter four months of the 1968-69 school year at P.S. 46 Bronx, included eligible children from P.S. 32, 26, 79 and 85, as well as from P.S. 46 itself. Its first full year of operation was 1969-70. An evaluation of reading progress at the end of that year indicated the need for a more intensive and self-contained program at P.S. 32. Accordingly, an autonomous reading center was set up at P.S. 32 and the original district Center (at P.S. 46) was able to include another school (P.S. 115) in its constellation.

The main center at P.S. 46 was staffed by a licensed teacher, with special training and experience in diagnostic-remedial techniques, who served for five full days per week. She was assisted by four trained, experienced paraprofessionals who worked with small groups of pupils under her supervision. In addition, a paraprofessional family worker supervised pupil bus transportation to and from the center. The center accommodated about 110 pupils and maintained a waiting list of about 35 pupils eligible for admission to the program as vacancies occurred. Such openings occurred when a child was transferred out-of-district or when one made sufficient progress to be "graduated" from the program - that is, attained grade reading level.

In the main, grade 2 pupils were selected for testing - however, there was sufficient flexibility to include some grade three pupils (repeaters) and even some from grade one when special need was indicated. Classroom teachers recommended their most retarded readers for testing by Center personnel. The Center and Guidance personnel at each school cooperated in efforts to avoid admission of severe emotional deviates to the Center, feeling that these children required clinical help of a psychological nature rather than the diagnostic-remedial help offered by the Center. At times, the Center did discover children with psychological and neurological problems who were accepted and immediately referred them to the school guidance counselors for help in seeking therapy for them.

The testing process for Center admission was performed by Center personnel during September and October at each school. Such screening devices as the Spache Diagnostic Reading Scales and the Harris Word Lists were included in the selection of pupils.

Parents were notified of pupil selection and gave their permission for their

child's participation in the program.

In the course of the current school year, the district reading coordinator was made aware of a rapidly changing school population at still another district school (P.S. 91) indicating a large number of primary pupils needing this type of intensive reading help. State funding was obtained (in March of 1971) for the establishment of a third center at P.S. 91. Therefore, although of relatively recent origin, this P.S. 91 center is being included in the total evaluation survey although its short existence did not allow for more than one visit by the evaluator and some brief discussion with district and Center personnel.

The newer and smaller center at P.S. 32 had one trained, experienced professional who served three days each week. She supervised two paraprofessionals whom she had trained; they worked with small groups under her supervision on the days she was in attendance. On the other two days they carried out special assignments, conferred with classroom teachers in the school and provided individual help to certain children. They also did much of the necessary record keeping and preparation of materials. This center serviced about 40 pupils and maintained a proportionate waiting list of screened, eligible children from which it made immediate replacements when openings occurred.

## II. PROGRAM OBJECTIVES

The objectives of the program as stated in the original project proposal were:

1. To improve the reading achievement of second grade children through an intensive program of diagnostic and remedial instruction.

2. To train professional and paraprofessional staff to conduct diagnostic procedures and remedial instruction effectively.

## III. EVALUATION DESIGN AND PROCEDURES

The goal of this evaluation was to assess the degree to which this program was achieving the two original objectives: 1. the improvement of reading achievement of second grade pupils and 2. the effective training of professional and paraprofessional staff members to practice the necessary diagnostic and remedial procedures. The evaluation design included the following processes:

A. Interviews with personnel involved in the establishment and implementation of the entire program. (District specialists, school supervisors, classroom teachers, professional and paraprofessional Center staff members)

B. Interviews with parents of pupils included in the program.

C. Questionnaires to last year's teachers (1969-70) and to this year's teachers (1970-71) whose children attend the various centers, to seek their judgments as to the values or deficiencies of the program.

D. Visits to all three centers, the major proportion to the P.S. 46 Center, throughout the year from October to May, to observe activities of teachers, paraprofessionals and pupils and to become familiar with materials and equipment utilized in the program.

E. Joint visits with the P.S. 46 Center Staff members, to several participating schools to observe pupil screening, teacher interviews, and a luncheon conference between school and Center staff members.

F. Auditing a meeting of parents of Center pupils, called at P.S. 46 Center, which provided an opportunity to confer with several of them.

G. Examination pupil records maintained by the Center staff as well as reports periodically sent to classroom teachers to apprise them of pupil progress.

H. Analysis of scores of reading tests administered in October 1970 and in May of 1971 to all children recommended by classroom teachers for consideration for admission to the Center program. Those children who were accepted and given help by the Centers throughout the year are referred to in this report, as "Center Pupils." Those pupils who were equally retarded but remained on waiting lists and did not receive remedial help, are referred to as "control pupils."

## IV. PROGRAM IMPLEMENTATION

The Center at P.S. 46, which serviced 4 neighboring schools as well as its own pupils; had a structured program calculated to make maximum use of time and available space.

Three hours of each day from Monday through Thursday were devoted to work with children from the 5 schools involved. These hours were 9:30 to 10:30; 10:30 to 11:30; and 1:30 to 2:30. Certain schools were scheduled for sessions on Monday and Wednesdays - other schools on Tuesdays and Thursday. Extra time, such as the half hour (9-9:30) before the first morning session, was allotted to special needs of P.S. 46 children who were "on the premises" and available for this intensified help. Thus, the P.S. 46 children had the advantage of about double the remedial time allotted the other schools. Part of each day, when children were not in attendance was required for voluminous record keeping and for planning conferences between the professional teacher and her paraprofessional co-workers.

About 20 children from each school were scheduled to arrive by bus for each teaching hour. These children had been called for at their home school by the Center's paraprofessional family worker who supervised them on the bus and led them to and from the Center room.

The entire group was divided into 4 sub-groups of 5 each, under the supervision of the 4 paraprofessional teachers. The lesson often opened and/or closed with a full group experience conducted by the professional teacher. Her purpose was two-fold: to provide a pleasurable and instructive total group experience -a drill encompassed in a game, listening to a recording, singing a song - and to demonstrate teaching techniques and utilization of equipment to the paraprofessionals as part of their on-going training.

The children were grouped according to ability; consideration was also given to their emotional and temperamental needs, so that each teacher had a pupil constellation with which she could work effectively.

The day's program was pre-planned by the head teacher and her four paraprofessional co-workers so that a constant rotation of varied activities was provided for the entire hour. While each group was at work, the head teacher called aside 4 or 5 children for individual teaching or reinforcement of a skill, utilizing teaching machines, record players with individual ear phones and related printed materials, primer typewriters, filmstrips, and viewers, language games. After checking and logging individual progress, these children were sent back to their groups and replaced by others. Thus the head teacher maintained continuous contact with all children in order to be able to compare her impressions with those of the paraprofessionals, as to progress and needs.

Fridays were not scheduled for teaching but were utilized for testing pupils for admission to the program, for conferences with teachers and administrators in the various schools, for school visitations, and for record keeping and planning by the Center staff. This day was also focused on the training of the paraprofessionals when pupils needs as well as teaching methods and materials were discussed.

The P.S. 46 Center accommodated about 110 second and third grade pupils. A waiting list of 35-40 eligible children was maintained to provide immediate replacement whenever vacancies occurred. This Center was housed in a standard sized classroom on a floor that was euphemistically called "fourth" but that was actually 5 flights above street level. The room was light and pleasantly decorated with children's work and commercially prepared reading materials (pictures, books, charts, posters, etc.). There were several reading machines available - some for use with small groups, some for individual children, most of which were programmed for constant use during the teaching hours. These included individual record players, ear phones, records, and accompanying printed materials. Children were able to work alone, to be checked by the teacher, and to progress from one recording to another according to a graded sequence of difficulty. In addition the Center was equipped with a large supply of reading materials to develop auditory and visual discrimination, including some of the newest and most innovative of the commercially prepared materials as well as those constructed by teachers for special needs of children. Not all can be listed here but some of the following were noted:

1. Auditory discrimination:

See and Say Puzzles
Show you Know - Then Go-Phonics Game
Bank Street Dittomasters

The First Talking Alphabet
Hear-See-Read

Riddle a Rhyme
Speech to Present Phonics
Durrell-Murphy. Phonics Practice Program
Time for Phonics Program
Match and Check
Talking Alphabet

2. Visual Perceptual

Fitzhugh
Perceptual Bingo
Spatial directional orientation
Teacher made materials
Bank Street Dittomasters
Dubnoff Program
Matrix Game (Appleton Century)
Pruner Typewriter

3. Language and Reading

Hear-See-Read
Bowmar-Read Along (Story book)
Language Puzzles
Alphabet cards
Words in Action (Pictures for role Playing)
Teacher Made materials
Programmed Reading
Prim-O-Tec
Alphabet books

4. Equipment used: Phonographs, tape recorder, filmstrip, viewers, typewriters. Games, manipulative materials

The P.S. 32 Center, having been formed after the original center, had the advantage of its prior experience. Their program was similar to that offered at P.S. 46 except that they serviced only about 40 children, they focused their efforts on their own school, and the head teacher was in attendance on three days of each week. There was close communication between the two head teachers of both Centers. There was also good communication with the District reading coordinator.

This Center was housed in a very small room, comparable in size to a supply room, having several windows. It accommodated two groups of children (4 or 5 in each group) and the teacher and her two paraprofessional assistants only with the greatest degree of good will and ingenuity.

The materials on hand, while not as voluminous as those of the larger center, were also varied, well chosen, and well utilized in spite of manifest space limitations.

The third and newest center at P.S. 91 opened in March of 1971, had been in operation for only a few weeks when visited by the evaluator in April. Again, its program and type of operation, were similar to that originally established at the first center at P.S. 46 and adopted at P.S. 32. Its staff consisted of an experienced professional teacher and two paraprofessionals recruited from their own school. Various factors, possibly including the experiences of the two prior Centers, as well as that of the District Reading Coordinator, seemed to facilitate the smooth opening and functioning of this Center. Its physical locale consisted of a fairly small room of less than classroom size, and an anteroom. However, room and facilities seemed adequate and well utilized in this situation.

This new center was similar in program to that of P.S. 32 - the teaching hours, servicing about 40 children of P.S. 91, were encompassed in 4 days of the week with the fifth day devoted to training of the two paraprofessionals by the head teacher, conferences with teachers in the school, testing of new applicants for admission and planning of future lessons.

Although a newly established center, it was already well equipped with several audio-visual and teaching machines, a typewriter, and a large supply of varied books, games, puzzles, and teaching materials.

Such problems as manifested themselves in program implementation were admirably handled by the staff and related less to the program itself but rather to certain peripheral matters such as paraprofessional fringe benefits, room size or location, and efforts at achieving greater involvement of classroom teachers and supervisors in Center activities.

## V. PROGRAM EFFECTIVENESS

The assessment of this program's effectiveness in achieving its two stated objectives is based primarily on the following three procedures:

1. The first set of judgments is based upon an analysis of questionnaire responses of both last year's and this year's teachers sending pupils to the P.S. 46 and P.S. 32 centers.

2. The second set of conclusions is based upon a series of procedures in which the evaluator was involved between October and June. These included ten visits to the centers, visits to several schools in the P.S. 46 complex; observations of pupils and teaching-learning activities; examination of pupil records, materials, and equipment; and interviews with Center teachers, paraprofessionals, school and District supervisors, and parents.

3. The third aspect of this evaluation is concerned with a comparison of scores of the reading tests administered early in the year (October 1970 or later) when pupils were accepted for the program and those administered late in May of 1971.

### 1. Analysis of Questionnaire Responses

The first questionnaires, sent out in December of 1970 were directed to last year's grade two teachers, the first full year participants in the program, with the hope of eliciting from them a retrospective overview. Teachers were not asked to identify themselves by name. Thirteen questionnaires were mailed and 8 replies were received. Their responses indicated the following:

1. Number of children attending Center (at P.S. 46)

Since 20 children could be accommodated for any teaching hour at the Center, there had to be some limitation on the number of children accepted. This number varied from 3 to 12 from any one class. The total number attending from any given class generally remained static throughout the year, as replacements were made from the waiting list when a center child either moved out of the district or was "graduated" because of progress made.

2. Number of Sessionsper Week

The P.S. 46 children, having the center in their own school were able to be accommodated for 4 sessions per week. The children from the 4 participating schools who required bus transportation were accepted for 2 hourly sessions per week.

3. Attitudes of children towards inclusion in program

Most of the teachers characterized their children as eager or enthusiastic about attendance. A few reported reluctance, indifference, apathy, or even, in one instance, a direct quotation from one youngster that "the work was too babyish for me." Several of these teachers did indicate, however, that initial pupil reluctance or fear of missing desirable homeroom activities was obviously overcome as the year progressed and the child experienced greater involvement in the center's activities.

4. Teachers' reactions towards necessity of children being out of classroom on regular basis

Teachers, in reporting their own attitudes (as well as activities) reported a wide range of reactions, ranging from such negative ones as:

a. "they left during optimum teaching time"

b. "children missed a great deal of work and couldn't make as much progress in my reading."

c. "they left at an important time of the day"

These reactions, however, were offset by a majority of favorable responses which often included the teacher's own compensatory efforts in these situations:

a. "I worked on advanced workbooks with the rest of the children - those who attended (reading center) couldn't have used these books -- therefore all benefitted from the arrangement."

b. "Most who went needed help in basic skills and did obtain it there, so it was helpful in the long run."

c. "I felt good because of the attention they received and the materials they were able to use"

5. Evidences of parent attitudes towards their own children's inclusion in program

This question also evoked a broad spectrum of teacher responses. Some indicated signatures on the original pupil permission slip as the only discernible parent reaction. One teacher reported refusal of permission; one teacher indicated a parent's expressed scepticism about the value of the program (although permitting her child to attend); one teacher described some parents as apathetic or indifferent. The other replies, however, reported gratitude and appreciation expressed openly by several parents.

6. Teachers' judgments as to whether ultimate results justified entire program

Two of the eight teachers responding offered negative responses. One said "Actually there was little improvement in reading. Most

children involved had emotional problems which interfered with their reading." Another remarked, "The two who showed progress had poor attendance - they might have improved anyway."

The other 6 responses were positive and enthusiastic and included such judgments as:

a. "the children gained knowledge, confidence, and understanding"

b. "I think the children were all helped by the program - they will be able to pick up and function in the regular class - they did develop the basic skills"

c. "Definitely! Many were "graduated" during the year and caught up with the other children, or improved to a great extent. They functioned better in class - children thrive when they achieve some measure of success"

7. Teachers' suggestions for improving the program to increase potential benefits to children

This request elicited some of the following:

a. "extend availability to more children"

b. "teach classroom teachers to use center's materials and techniques"

c. "make center's equipment available to all schools

d. "provide follow-up work (issued from the reading center) so that children might continue in their own classrooms in small groups"

e. "provide classroom teacher with specific summary of daily activities covered at center - so teacher might proceed along similar lines.

f. "too much time spent in traveling -- program should be set up in each school"

The second questionnaires were sent to 27 teachers of the 5 schools serviced by the P.S. 46 Center and to the teachers of P.S. 32 which now had its own Center. There were 4 third grade teachers among this number- all the rest were second grade teachers. The 27 questionnaires sent out in the latter part of April 1971, brought a total of 21 responses by May 7th, the due date. These responses indicated the following:

1. Number of Children attending the Center

Some classes sent only 2 or 3 children to the center, particularly to the center at P.S. 46 where the maximum was 20 pupils for any teaching hour. At P.S. 32, where the center was located within the school itself, some classes were able to send as many as 13 or 14 children to the center in the course of the week. Although the room housing the center could accommodate no more than 10 children at any one time.

At both centers, changes in pupil personnel were made throughout the year as "openings" occurred. One school, which had the availability of other reading help within the school reported some change in numbers being sent to the center. Otherwise pupil constellations remained substantially the same throughout the year.

Most children of P.S. 46 were able to attend the center for 4 sessions per week, since the center was located in their own school, obviating the need of traveling. Similarly, at P.S. 32, there was a flexible program arrangement of from 2 to 5 hours per week for different children, depending on diagnosed need. For the other 4 schools, requiring bus transportation to the P.S. 46 center, two hourly sessions per week were scheduled. Certain schools sent pupils on Mondays and Wednesdays, other schools on Tuesdays and Thursdays.

2. Children's reactions to inclusion in program

Several teachers did cite instances of reluctance, hostility, or fear evidenced by some children, particularly in the early part of the year. Some such examples were:

1. "Two became hostile and reluctant to go"

2. "One child varies her opinion from indifferent to reluctant. Another one is hostile and often refuses to go."

3. "At the beginning, it was just a matter of fear of the unknown"

For the majority of pupils however, the teacher's descriptions were extremely favorable, as evidenced by the quotations below. Teachers frequently described a favorable change in attitude as the term progressed and as the children sensed improvement in their own achievement.

1. "They were, at first, indifferent - due, most likely to lack of of understanding about the program. Most developed an interest and seemed eager to attend."

2. "They seem eager and enthusiastic. They are rarely absent in days on which they attend the Center."

3. "Most are eager to attend. Some appeared slightly unhappy at first, but as they progressed, they are much happier"

In this regard, an unprecedented incident occurred while the evaluator was observing a day's activities at the P.S. 46 center during the latter half of the year. A school group arrived encompassing about one half of the total number of children who normally attended that session. The paraprofessional who supervised the bus transportation explained the reduced group, somewhat as follows. "The others were disorderly, so the person at the school who supervised their dismissal punished them by not

allowing them to go to the center for today. They promised it would never happen again but they were told to return to their classrooms"

This announcement resulted in some consternation among the center staff. Should half these children have been obliged to miss a session? Did the punishment fit the crime? Upon further consideration, they concluded that, while they were upset by the incident, it revealed an interesting aspect regarding children's attitudes - e.g. it was considered a punishment to be prevented from participating in a center session.

3. Evidences of carryover to classroom of skills acquired at the center

A few teachers indicated no evidence of perceptible gains among the children attending the center. Their statements were:

a. "Difficulty in retaining learned material seems to be greatest drawback"

b. "I really don't know of any"

c. "No specific evidences of carryover - perhaps because children are not very verbal"

The majority of teachers, however, did cite examples of skills acquired at the center which evidenced themselves in classroom activities. These included:

a. "Some bring books back to the teacher to show that they can read. Pride in achievement is evident"

b. "Improvement in handwriting and in visual discrimination"

c. "They show more ability to sound out words they have not seen previously"

d. "General interest in reading and increase in word attack ability."

e. "Two of my pupils seemed to have gained strength in applying phonetic skills to their reading in general."

f. "Reading comprehension improved. Child used phonic skills to identify unfamiliar words."

g. "Perform better along with other children in class. Responses given more easily."

4. Teachers' awareness of difficulties stemming from pupils' being subjected to different teaching approaches

The two most obvious differences were in the small group or individual approach that could be offered at the center (5 teachers to a maximum of 20 children) and in the avilability of a greater variety and quantity of specialized instructional materials and equipment than is generally found or utilized in the average classroom. There was an almost uniform response from the teachers that no difficulties were encountered because of children's exposure to other teaching methods at the Center. In fact, some teachers rather wistfully indicated that if these two features could be included in their own classrooms, they might more nearly approximate the ideal teaching situation.

5. How teachers deal with problems of necessary pupil absence from the classroom to attend the center

Responses here were most revealing of the realative ingenuity and creativeness of some of the classroom teachers involved, and of their efforts to exploit this curriculum resource to its fullest (in spite of certain recognized problems). Some cited varied and creative means utilized to compensate to children who had to miss certain activities while attending the center. Some of these compensatory activities included:

a. Utilization of paraprofessionals and student teachers to give individual help to pupils attending center.

b. Programming class reading group activities while center pupils are doing reading at center, so as to minimize their missing other class work.

c. Assigning pupil "buddies" to children attending center to copy and relay assignments given while they were out of classroom.

d. Programming activities such as library, free reading, or snack period during hours when children attended center, so that as little new work as possible would be missed.

Most teachers indicated frank recognition of the possibility of work being missed or of duplication of activities in some instances. However, they seemed to feel that potential gains compensated for possible losses. There seemed to be a positive correlation between a teacher's acceptance and appreciation of the center's efforts and her own efforts at accommodation to and compensation for any problems encountered in the coordination of classroom and center activities.

6. Discernible parent reaction to inclusion of their children in center program

Several teacher responses indicated no parental reaction beyond the signing of permission forms; some parents who had evidenced initial concern seemed grateful, later on, for the teacher's recognition of their children's need for help and for making such help available. Some responses indicated parent concern about the bus transportation involved; other parents, of children not included in the program requested that they be offered that advantage if possible. Subsequent conferences with parents (at a Parents' Meeting at P.S. 46) confirmed these teacher judgments.

7. Suggestions for improving the program to increase its potential benefits to children

Many of these suggestions concerned problems recognized by Center personnel, but often these were problems not lending themselves to easy or feasible solutions. In some instances efforts were already under way towards their amelioration.

These teacher suggestions are outlined here with, in some instances, comments offered by the center staff as to their viability or feasibility.

a. "The half hour, each way on the bus is a waste --- traveling time negates benefits"

(Financial and geographical consideration make the ideal situation of a center at each school impossible of immediate realization. Where a school complex such as exists around P.S. 46 makes bus transportation a feasible possibility, it seems worth while to continue as heretofore. Where a new self-contained center is a possibility (without his transportation) that policy should be followed e.g.: P.S. 32's center was opened last year and P.S. 91's this year)

b. "Have facilities extended to include more children. I find it a very successful program."

c. "Some children should go yearly."

d. "Classroom teacher should have greater knowledge of activities in center . . . ."

(Staff of center emphatically seconds this suggestion. Emphasis on teacher visits to center is to be increasingly stressed, with accompanying efforts at devising means for class coverage within schools to permit such teacher visits.)

e. "Classes should be re-evaluated during year making it possible for other children to enter program. New class admissions in the course of a year should be tested for inclusion"

f. "Perhaps more communication with classroom teacher. Often children unable to verbalize what they were doing (while at center); therefore reinforcement or follow up was difficult"

(While staff members at center recognize the value of more communication with classroom teachers, they indicate that many means are currently being utilized, e.g.: periodic written reports to classroom teachers on each child attending center, arrangement of center-school conferences, invitations for teachers to observe center activities, frequent contacts with guidance personnel etc.. They feel that under present allotments of time and personnel, taking time from actual pupil-teaching time would defeat the primary goal of the project, that of helping children to read. Center staff indicated that if schools could cover classes to allow each teacher a day's observation per semester at the center, increased communication between center and school staffs and better understanding would be achieved.)

g. "Increased frequency of attendance - (perhaps 4 x per week) would be helpful"

(Undoubtedly so, according to opinions of center staff - wherever feasible as in P.S. 46, 32 and 91 with centers on the premises, the 4 x per week schedule is arranged. Where bus transportation is a factor, time prevents this intensified program at present)

h. "Let each child return to class with written statement on particular days' activities so teacher may build on these skills."

i. "More contact with center (for classroom teachers). Extend program to include more children."

j. "More meetings with classroom teachers. I would have been able to compensate for class work missed without being repetitive."

k. "Continue similar help into grade three."

The summary indicates that teachers felt the program was generally effective in reaching its first aim, "improvement of reading ability of second grade children through an intensive program of diagnostic and remedial instruction."

In response to both questionnaires, the teachers indicating positive gains far outnumbered those who either pleaded ignorance or revealed a pessimistic outlook as to the program's influence on children's reading ability.

2. Visits, Observations, Examination of Resources and Interviews Conducted by Evaluator

Repeated visits to all centers, with the greatest number, of course, to that at P.S. 46 resulted in the following conclusions by the evaluator:

a. The program manifested an inherent dynamism by growing in response to pupil need and in the direction of establishing smaller self-contained centers in separate schools. (P.S. 32 and P.S. 91)

The District reading coordinator and the teachers heading the centers are in agreement, however, with some of the teachers' suggestions for further growth:

"Continue similar help in grade 3"

"Extend program to include more children"

"Some children should go yearly"

"Have facilities extended to include more children"

b. Unusually good rapport was evident on all levels, this general staff good will seeming to extend itself to children and parents.

The District reading coordinator kept in touch with the head teachers of the centers, provided new machines and materials, arranged for repairs and replacements, and issued frequent bulletins on facets of the reading program with helpful suggestions for implementation.

There was an obvious feeling of consideration for the paraprofessionals, shown by the teachers heading each Center, and this attitude seemed to be reciprocated. The training of these paraprofessionals had certainly not been neglected. This was one very positive attainment of the program, that must be emphasized. The paraprofessionals had been trained in many of the techniques of primary teaching and of human relationships - particularly with regard to young children in small group or one-to-one situations. They seemed firm but gentle and they were sensitized to recognize fatigue or inattention and to provide alternative and varied activities to overcome these obstacles to learning. They were stimulated and encouraged by the head teachers.

One serious problem was known by the professionals, but they were unable to ameliorate it. This concerned certain basic inequities existent between the original contracts of these paraprofessionals, of this State funded program, and those of other "Federally funded Title One" programs. There were differences in fringe benefits relating to holidays, vacations, and working hours. By December, some equalization concerning working hours had been effected, but others still remain unresolved.

These paraprofessionals are a vital part of this program's effort to provide small group (rather than full class) teaching situations for retarded primary readers. Therefore much time and effort has gone into their training. This training plus their good will, experience, and commitment to the program are assets which must be conserved. Thus far, one paraprofessional has left the program and, after a previous successful efforts, has been replaced. However, it is recognized that effective continuance of this program is predicated upon the maintenance of a stable staff, whose training, experience and dedication are vital assets.

c. The teacher training aspect of the program was being fully realized in one facet - when a new center was opened, the teacher selected to head its operation had the advantage of being able to observe and adopt the practices of the P.S. 46 center and received help from the District Reading Coordinator. As for the training of other teachers in the District, especially those sending children to the Centers, this goal is evidently not being fully realized.

Several factors are operative here:

1. Schools evidently find it difficult to "cover" classes to allow teachers to visit the Centers on some programmed basis. There has been a minimal number of teacher visits to the centers in the course of the year.

2. Very few principals have visited the Centers to become aware of the materials available and of the practices effectively utilized with their own children attending the Centers. (This is less true, of course, of the supervisors who have centers in their own schools.) However, if principals could spare some time for even one such visit they might envisage teacher-training possibilities for some of their own teachers, and seek means of covering classes and programming teacher visits.

3. The housing situation for all the centers is deplorable, due mainly to overcrowded schools and lack of available and appropriate space. As described in prior parts of this report, one must climb five flights to reach the P.S. 46 Center. While it is housed in an average sized classroom, when 20 children and five teachers are doing group work, there is very little room for more than two visitors. The P.S. 32 center locale

is virtually a large stock room, with windows, and while effective remedial work is being done, there is hardly place for an observer within the room. The P.S. 91 room is slightly larger but still inadequate for accommodation of observers. This housing problem is interrelated with the teacher-training aspect, and perhaps consideration on a District level is warranted.

d. There was a manifest difference in the acceptance of and cooperation with the Center's program on the part of different participating schools. These differences might best be described anecdotally, as recorded by the evaluator over a course of several visits:

1. Some schools always sent the full quota of children (18-19-20) to the center, others did not. The lower attendance was explained by existence of other simultaneous programs, etc. However, underutilization of a curriculum resource constitutes an obvious waste and a rejection of possible benefits.

It should, in all fairness, be noted that the situation described above was ameliorated as the year progressed but the premise holds - the fully successful utilization of a program is predicated both on what it offers and in how well it is accepted and appreciated by its participants.

2. Related to the cooperation of the participating schools is the problem of pupil testing for admission to the program. In one situation observed,the space provided by a school for such testing was in a pupil lunchroom, where simultaneous recreational activities were taking place.

3. At one school, teacher-teacher conferences took place "on the wing" where the members of the center visited a school, on a scheduled Friday visit. First of all, several classroom teachers were away on trips - other teacher-teacher conferences took place in front of classes. The cause of these circumstances seemed to be lack of adequate pre-arrangement

on the part of the person acting as liaison between the Center personnel and the school. The center staff visit should have been postponed, if all teachers involved were not to be present, and some arrangement, should have been anticipated to provide for quiet conferences, outside of classrooms.

At another school, equally busy and short of space, the principal had arranged for a lunch hour conference where he and all his second grade teachers sat, over cups of coffee, with the Center staff members, and discussed program, pupils, and the possibility of teacher visits to the Center.

The above observations are recorded to indicate the factors which hinder the full realization of a "service" program such as this one. A frank recognition of these obstacles, both on the school and on District level, would certainly offer some solutions in relation to space, time, personnel, careful programming, and of liaison responsibility within focusing schools seeking to obtain maximum benefits from the program.

e. One of the most revealing factors in the observations of the evaluator was the change in children's attitudes that occurred almost imperceptibly at first, but markedly as the year progressed. They seemed, in October, a group of separate little isolates, removed from their home schools, taken on a bus, and brought up to what seemed to be just a strange classroom in another school. Some were apathetic and removed, some seemed almost sullen, and all but one or two proved very hard to "involve" either in the whole group introductory activities offered by the teacher, or in the subsequent small group activities, under the professionals. Subsequent visits during the next three months gave evidence of greater responsiveness, desire for participation, enjoyment in their activities and establishment of a close relationship with their group

leader, the paraprofessional. Moreover, there was a purposiveness beginning to be evident especially in those called out to sit at an individual record player to read related cards while listening to a recording on their own earphones, to stop the recording at the conclusion, and to appeal to any available adult (the head teacher and even the evaluator) with "Listen to me while I read these cards - then I can take the next record". They learned the sequence and took the appropriate recording and related cards, often spending 20 minutes or so before having their progress noted on a cumulative log and being able to enjoy another activity. The same attitude prevailed in those using the primer typewriter or certain games in which alphabet letters were matched, or manipulative activities which helped develop basic reading skills such as the left-to-right eye movements.

Moreover, a kind of group cohesiveness developed. They had been isolates at the beginning because the 20 children assembled from a school may have represented six or eight different classes. By mid-year they were a group, who seemed to come together willingly, to participate actively(and vocally!), and to depart proudly with a self-selected library book which they promised to read and return by the next session.

The evaluator tried to analyze the factors which seemed to be operative in involving these children so completely. These seemed to include:

a) the sensitive pacing of activities - before boredom set in, the teacher terminated one activity and introduced another. The purpose of the four different activities encompassed in one hour might all have been the same (focus on initial letters of words, as an example) but this was the teacher's goal-as far as the children were concerned they were being permitted to play four different kinds of games (some visual, some aural, some kinetic in emphasis) all of which involved noting the first letters of familiar and unfamiliar words. It was varied-it was fun- they were learning!

b. The availability and creative use of a large variety of materials was another factor that seemed to involve these youngsters in a way that could not have occurred in most full class situations. This small group arrangement was the closest approximation to a one-to-one situation, where as children responded orally, traced, drew, manipulated, wrote, read or listened, the teacher could range each child's utilization of the material at hand and could change it when it didn't produce any "learning." New materials were introduced at intervals during the year, so no staleness or boredom was allowed to develop.

All in all, while both activities and materials were geared to individual or small group usage, any classroom teacher would gain from observation of their effectiveness and might see possibilities for their adaptation in her own classroom.

c. A parent meeting conducted at P.S. 46 in March of 1971 offered the evaluator an opportunity to talk with most of the eight parents who attended. These were all interested parents who expressed their qualification for the extra privileges the Center was extending to their children. Some of their statements concerning other parents (who did not attend) and describing the extra efforts they themselves had to make to come to this meeting indicated that much parentnon-attendance cannot be attributed to apathy or lack of interest but rather to the need to be at a job, obligation to other siblings at home, and general household and family burdens.

Such parent meetings were arranged at all the participating schools during February and March. The Center staff was visibly disappointed when - as at one meeting - only eight out of 20 parents were able to attend. They planned that, hereafter, in an effort to anticipate the younger sibling obligation, they would arrange for sitter service for these

children, and announce this fact in future invitations.

d. The records maintained by professionals and paraprofessionals in this program are both numerous and conscientiously kept. They are described briefly below:

1. The initial Pupil Screening form is made out for each pupil recommended for testing for admission to the center. The data is copied by the Center Staff members as they visit each participating school (or class in autonomous centers) to test applicants.

2. Initital Testing Form used to record results of various tests given at beginning of year and at end of year for each child in the program. One copy goes to child's Teacher, other remains in Center's file.

3. Form used for Midyear informal Evaluation of each pupil

4. Final Evaluation Form including Test Scores, Materials Used, Language Development, Personal and Social Adjustment, Relationships with Teacher, Needs shown in Visual and Auditory Perception, Progress Made and Recommendations

5. Form used by Assistant Teacher for each child in her group to record performance with different kinds of material and equipment used at Center

6. Teacher's Record of Pupil Needs Entries made in Nov., Jan., March, and May by paraprofessional for each child in her group

7. Communication with parents re:innovative Take-Home program of Tape-Recorder, cassette tapes and booklets for parent-child practice at home

8. Evaluation of Pupil Progress at Center - Form made out for each child and sent to classroom teacher in January, March and June

9. Note to Parents re:meetings to discuss Center's Program and Child's Progress

A perusal of the above list indicates that two forms - Number 2 (Initial Testing Form) and Number 8 (Evaluation of Pupil Progress) are submitted by the Center staff to the classroom teacher of each child periodically during the year, to keep the teacher informed of the child's initial status, interim progress, and final status. The true value of these forms lies in the extent to which the classroom teacher studies the findings, and tries to relate her classroom efforts to the recommendations of the Center. If opinions differ, or if the Center's findings appear startling or unrealistic, she should communicate with the center for an appointment to discuss their different impressions and arrive jointly at some consistent approach to the child's needs.

3. Analysis of Test Results

On October 5, 1970, at the inception of the P.S. 46 Center program for the year, there were 124 children accepted at the Center from 5 schools. However, by May, when final retesting was to be done it was found that (because of dropouts for transfers and other reasons) there were 103 children who had actually completed the program. The tabulations below refer to these children who remained with the program and are called "Center Pupils".

The 34 "control" pupils with whom these children are compared are those who were similarly recommended, tested, and considered eligible but who, because of space limitations, were unable to be accepted into the Center for help. The Spache Diagnostic Scales were administered to all children recommended by teachers (as being severely retarded or virtual non readers).

In the P.S. 32 Center, 37 children who completed the program were identified. Test data were available for 24 "control" pupils.

A summary of the mean initial and final test scores of these children on the Spache Scales are presented in Table 1. Results are presented separately for the children in the individual schools in the P.S. 46 Center, for the subtotals of all children in the P.S. 46 and P.S. 32 Centers, as well as for the total groups of children participating in the program.

TABLE 1

Mean Initial and Final Test Scores of Participating and Control Pupils in Reading Diagnostic Center Program

| | Center Pupils | | | | Control Pupils | | | |
|---|---|---|---|---|---|---|---|---|
| School | N | Initial Score | Final Score | Mean Gain | N | Initial Score | Final Score | Mean Gain |
| P.S. 46 | 27 | 1.45 | 2.65 | 1.20 | 4 | 1.70 | 1.87 | .17 |
| 26 | 21 | 1.29 | 2.10 | .81 | 5 | 1.24 | 1.64 | .40 |
| 115 | 20 | 1.42 | 2.57 | 1.15 | 5 | 1.24 | 1.72 | .48 |
| 85 | 17 | 1.37 | 1.87 | .50 | 9 | 1.06 | 1.51 | .45 |
| 79 | 18 | 1.13 | 1.91 | .78 | 11 | 1.32 | 1.48 | .16 |
| Subtotal | 103 | 1.33 | 2.22 | .89 | 34 | 1.31 | 1.64 | .33 |
| P.S. 32 | 37 | 1.25 | 2.52 | 1.27 | 24 | 1.20 | 1.91 | .71 |
| Total | 140 | 1.31 | 2.30 | .99 | 58 | 1.26 | 1.74 | .48 |

It is evident that the initial scores of the Center and Control Pupils were virtually identical. The mean gains shown by the two groups of pupils differed. The pupils attending the P.S. 46 Center showed a mean gain of 9 months, as contrasted with a gain of 3 months shown by the control pupils. In P.S. 32, the mean gain of the Center pupils was 13 months, as opposed to a 7 month gain by the control pupils. When the results for both Centers were combined, the Center pupils showed a gain of 10 months; while the control pupils gained only 5 months.

The result of testing these mean gains for statistical significance is summarized in Table 2.

TABLE 2

Significance of Difference in Mean Gains of Participating and Control Pupils in Reading Diagnostic Center Program

| Center | N | Mean Gain | t |
|---|---|---|---|
| P.S. 46 | | | |
| Center Pupils | 102 | .94 | 6.29* |
| Control Pupils | 34 | .32 | |
| P.S. 32 | | | |
| Center Pupils | 36 | 1.26 | 3.32* |
| Control Pupils | 24 | .71 | |
| Total | | | |
| Center Pupils | 138 | 1.02 | 5.80* |
| Control Pupils | 58 | .48 | |

* Significant at the .01 level

Children Retained in the Program. Nineteen children enrolled in the program during the 1969-1970 school year at the P.S. 46 Center were retained in the program for an additional year because they had shown minimal gains in reading during the initial year. These children were tested in September 1970 and again in May 1971. The mean scores of this group on the initial and final tests were 1.61 and 2.54, respectively. This represents a gain of 9.3 months. It would appear, then, that the decision to retain this group for an additional year was a sound one, in that their growth over that period was large enough to warrant their return to regular class instruction.

Follow-up of Children Who Participated in the 1969-1970 Program. In January, 1971, the staff of the P.S. 46 Center sent a questionnaire to the teachers of those children who had been enrolled in the Reading Center during the previous year. The purpose of this survey was to determine whether gains which seemed evident in June of the previous year had been maintained, and whether the children were able to function in their reading based activities in the regular classroom.

Because standardized test results were not yet available in January, Classroom teachers were asked to estimate the reading level of the children via an informal textbook reading test. Their estimates were compared with the results of a similar informal test administered at the Center in June 1970.

Because of the high mobility of the children, it proved to be possible to locate only 45 of the children in the original group. A comparison of the two estimates of reading level indicated that the mean gain of the group was 6.3 months over the five month period that had elapsed. If this informal test may be looked upon as a valid criterion, the children were maintaining themselves in the regular classroom.

There were other values in this procedure. A discussion of each child's progress and needs, in a conference between Center personnel and the classroom teacher, resulted in a sharper joint focus on each child, and was a mean of furthering communication between the two groups of teachers involved.

Taken as a whole, the data presented above indicate that the intensive individualized program offered at the Center was highly effective in improving the performance of the non-readers and severely retarded readers who were enrolled in the program.

## VI. MAJOR STRENGTHS AND WEAKNESSES

The major strength of this program is that it is definitely achieving one of its basic goals, the improvement of reading achievement of primary pupils. It is achieving only partially its second goal - the training of professional and paraprofessional staff members to practice effective diagnostic and remedial procedures. It is training professionals to head these centers effectively and it is training paraprofessionals to work with great skill under professional supervision. It is not as successful in reaching other professional personnel in the schools, on both teaching and supervisory levels, to share with them the kind of expertise it has developed over these past two years. Its other strengths lie in its dynamism, its potential for growth, its open-mindedness in shaping policies to meet school needs (opening of two new autonomous centers) and in the obvious good rapport it maintains among teachers, paraprofessionals, District specialists, pupils, and parents. Its creative acquisition and utilization of equipment and materials is another factor in its success. The provision of an infinite variety and succession of activities to children and its excellent planning are also contributory strengths. Its sensitivity to children, especially to children who are already experiencing failure at an early age is a prime factor in its achievement.

Its weaknesses are those that are either inherent to the entire school set-up (and not easily remedied by action of the Center personnel alone) or those that are caused by lack of adequate involvement or accommodation by potential recipients of this program. Among these factors are small and poorly located center rooms in overcrowded schools which almost preclude the possibility of teacher or supervisor visits and demonstrations

of techniques or materials. The continuing dissatisfaction of the paraprofessionals due to inequities in their contract is also detrimental to the program. Finally, the fact that some schools do not utilize the Center's full potential and do not provide proper liaison or cooperation is a hindrance to the full realization of this programs possibilities.

## VII. RECOMMENDATIONS

Certain of the factors operating to hamper the full realization of this program's effectiveness can be ameliorated, mainly by action on the the District level. A frank discussion by District supervisory personnel with heads of schools should result in:

1. A better understanding and acceptance of this programs' offerings;

2. A specific delineation of guidelines for better school cooperation; and 3. A better utilization of the teacher-training possibilities encompassed within this program.

A District-wide re-appraisal of the housing needs of such a service program seems essential to its present success and future growth. Centers, whether for bussed-in children or for those of an individual school should be housed in large, centrally-located rooms on the first or second floors of school buildings.

If future centers are to be established the trend, as in the last two instances, should be towards autonomous single-school centers rather than towards larger school constellations involving mass pupil transportation by bus.

The full force of faculty and supervisory support should be actively mobilized to help the paraprofessionals achieve redress of their grievances concerning certain basic contract inequities.

Finally, in this age of economics, where curtailment rather than expansion is part of the current trend, there must be intensive effort to retain and encourage growth in a program which meets such a basic need, the early diagnosis and prevention of reading retardation in children. The Reading Center Program has amply demonstrated its value and merits not only recycling, but expansion on a wide basis.

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FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
HARRY N. RIVLIN, DEAN

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Function No. 51-1-6454

# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "MULTI-SENSORY PROGRAM"

Prepared by

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An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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INSTITUTE FOR RESEARCH AND EVALUATION

JOSEPH JUSTMAN, DIRECTOR

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EVALUATION OF STATE URBAN EDUCATION PROGRAMS

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

"MULTI-SENSORY PROGRAM"

## I. INTRODUCTION

The Multi-Sensory Program, conducted in District 10 is a program that was recycled from the previous year. As projected, seven schools were to take part in the program. These schools were equipped during the 1969-1970 year with mobile carts that housed specific equipment and instructional materials used in remediation. The program was designed to promote the following pedagogical concepts: (a) Varying standard classroom organization by providing learning corners for small group instruction; (b) Individualizing instruction to a greater degree by gearing materials to needs both in multi-sensory groups and in the remaining smaller class group; (c) Adding variety to the learning experience with the use of audio-visual equipment in individual, small group, and whole class arrangements.

Approximately 2000 children in grades K-6 were to be serviced. One teaching position was to be funded to provide a teacher-in-charge for all the participating school programs in the project. She was to give in-service training to classroom teachers and to the 12 educational assistants assigned to the project. The educational assistants were to work for 184 days, 5 hours a day.

## II. PROGRAM OBJECTIVES

The objectives of the program as stated in the request for funding submitted by the District, were as follows:

1. To improve the performance in reading of the participating students through providing mobile carts especially suited to remedial small group and individualized instruction.

2. To train paraprofessionals in the care and use of materials, in helping teachers use materials, and in maintenance of records.

3. To train teachers in the use of new instructional materials and media and in the use of paraprofessional assistance.

## III. EVALUATION PROCEDURES

Evaluation of the Multi-Sensory Program was begun in the Fall of 1970 and continued through June, 1971. Four schools were randomly selected as sample schools to be studied for purposes of the evaluation. These were; P.S. 26, P.S. 56, P.S. 59, and P.S. 94. Questionnaires were sent to the above schools and P.S. 33.

Data was collected through observation of the program in action, interviews with the coordinator, teacher-in charge, educational assistants, teachers, and students, questionnaires distributed to teachers and educational assistants in five schools, and analysis of pre-and post-test scores of students who participated in the program.

One hundred questionnaires were distributed to participating teachers. Of these fifty one (51) were completed and returned. Eleven questionnaires were distributed to educational assistants in five schools. All were completed and returned.

Interviews were conducted with the principals and educational assistants in two of the new schools added to the program.

The evaluation objectives included the following:

1. Determination of the effectiveness of paraprofessional training and services.

2. Determination of the effectiveness of in-service teacher training in the use of instructional materials and in the use cf paraprofessional assistance.

3. Determination of the quality and quantity of multi-sensory materials and equipment.

4. Determination of the extent to which the Multi-Sensory Program affected the reading performance and attitude toward learning of the participating students.

## IV. PROGRAM IMPLEMENTATION

### Schools Serviced

A total of ten schools was serviced by the Multi-Sensory Program in District 10. Table 1 indicates the specific schools.

TABLE 1

SCHOOLS INVOLVED IN THE MULTI-SENSORY PROGRAM

| School | Program Began | Number of Educational Assistants |
|---|---|---|
| P.S. 7 | Sept. 1970 | 1 |
| 8 | Sept. 1970 | 1 + 1* |
| 26 | Sept. 1970 | 2 + 1* |
| 33 | Sept. 1970 | 2 |
| 56 | Sept. 1970 | 2 |
| 59 | Sept. 1970 | 2 + 1* |
| 94 | Sept. 1970 | 2 + 1* |
| 32 | March 1971 | 1 + 1* |
| 9/79 | March 1971 | 1 + 1* |
| 9/115 | March 1971 | 1 + 1* |

*Added in May 1971

Staff

Table 1 indicates the number of educational assistants assigned to each school. In addition there was one teacher-in-charge who worked out of the district office and whose main role was to supervise the para-professionals in their work and to train teachers and paraprofessionals in the use of the equipment and materials and guide them in learning to work together effectively.

Educational assistants worked with children on all grade levels. The number of educational assistants who worked with children on each grade level is indicated below:

| Grade | Number |
|---|---|
| Kg. | 7 |
| 1 | 8 |
| 2 | 8 |
| 3 | 6 |
| 4 | 7 |
| 5 | 6 |
| 6 | 5 |

Most of the paraprofessionals appeared to be well qualified in terms of their education and experience as educational assistants or teacher aides, and in particular as educational assistants in the Multi-Sensory Program.

All had received at least a high school diploma, two had had some college work and one had a college degree. Only two had had no previous experience as aide or assistant, two have had three months, and the others have had one to three or more years of experience as an educational assistant.

Table 2 indicates the length of time they had served in the Multi-Sensory Program.

TABLE 2

EXPERIENCE OF EDUCATIONAL ASSISTANTS IN THE MULTI-SENSORY PROGRAM

| Years | Number |
|---|---|
| New to Program | 2 |
| 1 year | 1 |
| 1½ years | 2 |
| 2 years | 3 |
| 2½ years | 3 |

Data were also available concerning teacher experience in the Program. Fifty-one teachers provided this information in response to a questionnaire item. There responses are summarized in Table 3.

TABLE 3

TEACHERS EXPERIENCE IN THE MULTI-SENSORY PROGRAM

| Years | Number |
|---|---|
| One half year | 10 |
| One year | 14 |
| One and one-half years | 2 |
| Two years | 15 |
| Two and one-half years | 2 |
| Three years | 5 |
| No response | 3 |

Slightly more than one-half of the teachers reported that they had participated in the Multi-Sensory Program for more than a year. Only 10 were new to the program.

Training

A series of three training sessions were conducted for teachers and paraprofessionals involved in the program. Throughout the year, the teacher-in-charge visited each school about twice a month. During these visits she supervised the educational assistants, instructed the assistants and teachers in the use of new materials or equipment, or answered questions raised by the paraprofessionals or teachers.

Activities

The educational assistant generally met with a group of approximately five students on an average of twice a week. A total of approximately 85 classes were serviced in the four sample schools studied. As of February, the educational assistants were scheduled to work 27½ hours a week. Generally five classes were visited each day, depending on the length of each class period, the grade level, and the length of lunch and preparation periods.

Materials

A variety of materials were available. These were arranged according to reading level and to purpose and type of materials - that is, word attack, comprehension, or literature. Examples of the multi-media materials include: New Phonics Skilltexts (all levels), The First Talking Alphabet, Learning and Listening, Listen and Do, Sounds and Stories, Riddle-a-Rhyme, Sights and Sounds, Child's Life in the Big City, Listen, Mark, and Say, I Can Read Signs, Let's Talk About Puerto Rico and Puerto Ricans, City Rhythms, Our Children's Heritage Filmstrip Series D and E, Beginning Fluency in English As a Second Language, Primary Grade Stories, Literature for Children, Spoken Arts Treasury of Fairy Tales, Skyline Series, Decoding for Reading, Rhiem T-Scope, Rhiem Remedial Reading Program, S.R.A. Listening Skills Program, Hoffman Reader, Living Prose, New Reading Skilltext, Living Poetry.

Equipment included:

Bretford Mobile Teaching Centers MTC/26 E

Phonographs

Filmstrip Viewer, Desk Viewer

Filmstrip/Slide Combination Projectors

Cassette Tape Recorders

Headset Earphones

Earphone Connection Box, Multiple

In general, there were three stations consisting of the above equipment in each school.

## V. PROGRAM EFFECTIVENESS

### The Training Program

Some insight into the effectiveness of the training program that was organized is given by teacher and paraprofessional responses to a question concerning ways in which they were assisted in learning how to use the instructional material. Of 25 teachers who responded to this question, 10 replied that the paraprofessional provided this information, 6 indicated that the necessary instruction was given by a supervisor in the school, 5 referred to training sessions held by the coordinator and teacher-in-charge, and 4 noted that they had examined the materials.

Eleven paraprofessionals responded to a similar question. Ten replied that they had been briefed by the Program coordinator, 7 referred to meetings at the District Office, 3 mentioned the help of the Reading Coordinator at District office, 3 noted that they had been helped by a supervisor in the school, 2 indicated that help was obtained from the publisher's representative or service man, one mentioned the help of other educational assistants.

It is evident that the brief time the Program Coordinator could give to training was reserved, in large measure, for training of paraprofessionals. Training of teachers apparently was a minor aspect of the program in the eyes of the teachers who participated; it had far

greater impact on paraprofessionals.

Effectiveness of Paraprofessionals

Paraprofessionals were asked to indicate their primary responsibilities. The responses of 11 paraprofessionals who responded to this question are summarized in Table 4.

TABLE 4

RESPONSIBILITIES, AS REPORTED BY PARAPROFESSIONALS

| Responsibility | Number |
|---|---|
| Teaching small group of pupils | 10 |
| Evaluating pupils' progress | 9 |
| Bringing materials into the classroom | 6 |
| Care of materials and equipment | 6 |
| Planning my lessons | 3 |
| Creating follow-up materials for lessons | 2 |
| Setting up equipment | 1 |
| Previewing equipment and demonstrating to teachers | 1 |

Analysis of paraprofessionals' perceptions of their roles reveals that most believed their primary responsibilities to be that of teaching small groups, evaluating these pupils' progress, bringing materials into the classroom, and the care of those materials and equipment. Only one gave any importance to assisting the teacher in learning to use equipment. Non mentioned team planning with the classroom teacher.

During the observations of the program, the evaluator noted that the paraprofessional would enter the class, assemble her group, and work with them with one of the programs, while the teacher either continued what she was doing with the rest of the class or went on to another lesson. At times the teacher would have the rest of the class work quietly at some independent seatwork so as to not conflict with the group using the multi-sensory materials. Some teachers indicated that having the students work in back of the room with the paraprofessional was disruptive to the rest of the class; some noted that they did not know what materials or equipment the educational assistant would be using or what concepts were to be developed. It was apparent that there was little or no communication or joint planning of lessons, use of materials, or provisions for carrying out effective group learning.

One very effective instance of such team work in the use of multisensory materials with a teacher and paraprofessional working together to implement grouping for instruction merits reporting. This was in a class where all students were eligible to participate in the multisensory program and were therefore able to use the materials and equipment. Both teacher and paraprofessional were very enthusiastic and obviously had discussed the needs of each of the three groups in the class, and selected materials to most effectively meet these needs.

The three groups worked very well using the materials and equipment under the guidance of the teacher and the Multi-Sensory assistant. It is interesting that this class was considered to be composed of slow learners and disruptive pupils, and yet worked enthusiastically and effectively when grouped and provided with interesting materials. They worked somewhat on their own since the teacher and paraprofessional had to divide their time among three groups. However, the students showed great pride and enthusiasm in the success they found.

In other classes where only a few pupils are eligible to participate in the program, the educational assistant usually took her four to six pupils and worked in relative isolation in terms of the total learning process of the classroom. Sometimes her lesson was a follow-up or a reinforcement of a lesson previously presented by the teacher, or dealt with an area of learning deemed significant by the teacher for development by the educational assistant.

The previous remarks should not be interpreted to mean that the program was not effective or that the paraprofessionals were not performing well. On the contrary, they were generally very conscientious, had very good rapport with the pupils (who received them, in most cases, with great enthusiasm), and took great care in planning the lessons, and evaluated pupils' progress carefully.

In general, the observer would rate the overall effectiveness of the paraprofessional in the classroom from "good" to "very good," although there was a wide range of abilities in terms of both teaching techniques and use of materials.

Participating teachers were also asked to rate the paraprofessional's effectiveness in regard to ability to use materials, general contribution in the class, and overall effectiveness. Table 5 indicates their responses given by 51 teachers.

TABLE 5

TEACHER OPINION OF PARAPROFESSIONAL'S EFFECTIVENESS

| Question | Excellent | Very Good | Good | Fair | Poor | No Response |
|---|---|---|---|---|---|---|
| What was the paraprofessional's general effectiveness in the classroom? | 23 | 11 | 10 | 5 | | 2 |
| What was the paraprofessional's contribution in your class? | 22 | 12 | 10 | 4 | | 3 |
| How would you rate the paraprofessional's ability to use materials? | 31 | 11 | 6 | 1 | | 2 |

More than half of the teachers rated their paraprofessionals "very good" or "excellent" in all three areas. They were rated highest in their ability to use materials. This was probably due to the training they had received.

Further questioning of the teachers revealed a number of weakness which limited the extent of the paraprofessional's effectiveness. Many of the teachers felt that the paraprofessionals did not work with the groups often enough. This hindered continuity of learning. They also commented that often paraprofessionals did not "show up" for the sessions and did not inform the teachers, or they arrived late and left early.

Teachers also observed that few pupils were reached. They stated that pupils were discriminated against since only those "on free lunch" were eligible. They suggested that at least substitutes should fill in when pupils in the group were absent.

Some suggested that there might be a limited period during the term when the paraprofessionals would work with each group, but that the work should be more intensive and meetings much more frequent.

A few teachers indicated that the paraprofessionals were not supervised sufficiently, and that there was no adequate training program for the paraprofessionals or for themselves in relation to the aims of the program, the roles of the teachers and educational assistants involved in the program, and in the organization of the classroom in order to implement group instruction effectively. There was little time for conferences with the educational assistant or teacher in charge of the program. (It is interesting to note, however, that one teacher stated that there were too many meetings!) Yet, it must be emphasized that many of the teachers indicated in one way or another that there was little planning between teacher and paraprofessional, that there was little consistency or follow-up of learnings, and that the teachers had little knowledge of what the educational assistant planned to teach the pupils or what materials were to be used during the sessions.

If a goal of the program is to encourage teachers to use new instructional media and to assist teachers in the use of paraprofessional services, there should be more communication between teacher and paraprofessional. This communication could take the form of planning together: concepts to be developed, grouping of children, and materials to be used in accomplishing the learning.

A number of teachers suggested that the multi-sensory group working in the back of the room was disruptive to the rest of the class and disturbing to the teacher. Some suggested that the group work in an area outside the classroom. It must be remembered that a primary aim of the program was to effect grouping for instruction. It appears that there is a need for more intensive training of teachers and paraprofessionals

in order to guide and encourage them to carry out simultaneous group instruction with the use of multi-sensory materials and equipment. Teachers and paraprofessionals need on-site training in implementation of group instruction with the use of multi-sensory materials. What is happening now, in many cases, is that paraprofessionals are teaching their groups of pupils apart from the class, even though instruction is taking place in the classroom.

Paraprofessionals also commented on aspects of the program which limited their effectiveness. They indicated that there was not enough time to work with each group often enough, and that there should be more paraprofessionals in order to reach more children. For the most part, they felt that their training program had been effective, but they believed that the teachers were not adequately prepared for the program in many cases. The evaluator noted that many of the teachers were not clearly aware of the goals of the program and of their roles in the implementation of the program. They were rarely involved in the planning or the implementation of the multi-sensory program in their classes. The educational assistants observed that, although most teachers were cooperative, there should be more communication between teacher and paraprofessional.

Materials

The evaluator rated the materials used in the program as "very good." Paraprofessionals were asked to indicate the materials they believed to be most valuable. Table 6 presents the responses of the eleven paraprofessionals.

TABLE 6

MATERIALS CONSIDERED VALUABLE BY PARAPROFESSIONALS

| Materials | Frequency of Mention |
|---|---|
| Hoffman Reader | 5 |
| Audio Reading Progress Lab | 5 |
| Acoustifone | 3 |
| Listen, Mark, and Say | 3 |
| Merrill Skilltexts | 3 |
| Talking Alphabet | 3 |
| Creative Learning | 2 |
| Aud-X | 2 |
| Creative Learning | 2 |
| Decoding for Reading | 2 |
| Riddle-a-Rhyme | 2 |
| Black Studies Series | 1 |
| Listen and Do | 1 |
| SRA | 1 |
| Sights and Sounds | 1 |
| Robert and His Family Series | 1 |

The two materials considered most valuable by the paraprofessionals were the Hoffman Reader and the Reading Progress Lab.

The paraprofessionals indicated that the value of the materials depended on the child with whom it was to be used. Most of the paraprofessionals were very pleased with the materials available and said they had had a part in determining the type of materials which were ordered. A few indicated that more materials and equipment would be desirable.

Many of the educational assistants stated that they had much difficulty in transporting the heavy equipment and materials to and from classes. Some mentioned that they did not have adequate storage space for their supplies.

Teachers were asked to rate the effectiveness of the materials used in the program. Fifty-one teachers rated the materials as follows: Excellent, 24; Very Good, 17; Good, 6; Fair, 2; No response, 2.

Most of the teachers rated the materials very good or excellent. A few suggested that more materials be made available. They also suggested that teachers be allowed to use the materials with groups or with the entire class.

From observations, interviews, and a study of the questionnaires it is evident that the materials used were of high quality and facilitated learning through various approaches. Two recent acquisitions, the Cassette Players and the Paperback Library, may be used at home by the child. These appear to be very valuable additions to the materials already in use.

Pupil Performance

The evaluator observed that most of the pupils were highly motivated by the materials and by the opportunity to work in small groups where

they could participate to a greater extent. Most of the children looked forward to the paraprofessional's arrival and received her enthusiastically.

Teachers were asked to indicate, based upon their observation and teacher-made tests, what effect the program had had on pupil interest and acheivement. The responses of the 51 teachers who responded are summarized in Table 7.

TABLE 7

TEACHERS' OPINION CONCERNING EFFECT OF PROGRAM ON PUPILS' INTEREST AND LEARNING

| Question | Excellent | Very Good | Good | Fair | Poor | No Response |
|---|---|---|---|---|---|---|
| What effect did the program have on pupils' learnings? | 5 | 17 | 14 | 12 | 1 | 2 |
| What effect did the program have on pupils' interest? | 15 | 15 | 13 | 6 | 1 | 1 |

Although teachers did not consider the program as effective in developing learnings as in developing interest to learn, almost three fourths of the teachers reported "good" or better results in the learning area.

All but a handful of the respondents felt that the program had a positive effect on pupil interest.

Scores on the city-wide Metropolitan Achievement Test were available for a sample of the pupils enrolled in the program, and for a generally smaller group of comparable control pupils and four grade levels, on a pre-test post-test basis. These data are presented in Table 8.

TABLE 8

MEAN GAINS OF PROGRAM AND CONTROL PUPILS

ON METROPOLITAN ACHIEVEMENT TEST

| Grade | | N | Mean Gain | t |
|---|---|---|---|---|
| 3 | Program | 59 | .63 | 3.51* |
| | Control | 11 | .23 | |
| 4 | Program | 93 | .72 | 1.48 |
| | Control | 44 | .54 | |
| 5 | Program | 50 | .90 | 6.24* |
| | Control | 14 | -.09 | |
| 6 | Program | 38 | .66 | .81 |
| | Control | 84 | .79 | |

* Statistically significant at .01 level

Gains shown by the pupils enrolled in the Program were higher than those of comparable control pupils in grades 3,4 and 5. In grades 3 and 5, the gains shown by the Program pupils were significantly higher than those observed in the control group. Differences in mean gains on the sixth grade level were not significant.

The participating pupils approached, but did not quite reach the goal of 8 months growth in grades 3,4 and 6. Nine months growth was achieved in grade 5. It is difficult, however, to arrive at a satisfactory measure of the growth of these pupils. Pre-test scores and post-test scores were both obtained on the Metropolitan Reading Test, but two different editions of the test were used in the city-wide testing program. As such, a direct comparison of pupil scores would be meaningful only if the two editions of the test were comparable; there is no guarantee that such comparability can be achieved in the process of test standardization.

The performance of the pupils can be looked upon in another way. One may compare their average growth in previous years with the growth shown during the current year. This comparison is presented in Table 9.

TABLE 9

MEAN GROWTH OF PROGRAM PUPILS DURING PREVIOUS AND CURRENT YEARS

| Grade | Mean Growth | |
|---|---|---|
| | Previous Years | Current Year |
| 3 | .55 | .63 |
| 4 | .52 | .72 |
| 5 | .55 | .90 |
| 6 | .59 | .66 |

In each instance, the growth shown during the current year was greater than the average growth shown during the pupils' previous schooling. Enrollment in the program, then, served to counteract the typical pattern of increasingly smaller increments in growth characteristic of such children as they progress through the grades. The change in growth pattern is particularly marked at the fifth grade level.

Program Strengths

One of the major strengths of the program was its able coordination by a person who had an excellent background in the area of reading. The coordinator and teacher-in-charge were highly professional and continually explored new avenues of approach to the child. The program provided for small group instruction, and thereby individualized learning to a greater extent than was possible in the classroom. This was the major

strength cited by teachers and educational assistants as well. The wide range of materials and equipment for instructional use may also be cited as a positive factor. The individualized attention and use of media created interest, increased motivation to participate and learn, and afforded pupils greater success than they might have experienced in whole class instruction.

Major Weaknesses

A major weakness of the program was that there was very little interaction between classroom teacher and educational assistant in terms of planning for instruction and carrying out group instruction. Teachers, on the whole, did not learn to use media or take any active part in the learning situation. The goal of training teachers to use new instructional materials and media and to use paraprofessional assistance was not achieved.

The educational assistants did not visit the classroom often enough. There was not enough time to work with groups on a regular basis in order to attain continuity of learning. The program reached only a few children.

## VI. RECOMMENDATIONS

The Multi-Sensory Program has amply demonstrated its value, and should be recycled for the coming year. The following suggestions are offered for consideration by the District:

1. Provision should be made for development of an on-site training program for teachers and paraprofessionals, to foster joint participation in multi sensory group work. Teachers should take a more

active part in the program; their responsibilities should be more clearly defined.

2. Joint planning of lessons and team teaching by teacher and paraprofessional should be encouraged. This will involve exploration of ways of allocating time on a scheduled basis for conferences between teacher and paraprofessional.

3. More adequate and more convenient storage space for materials and equipment is needed. Effort should be made to lighten the burden of transportation of materials and equipment, particularly from floor to floor.

4. Provide for a greater degree of supervision of educational assistants; in particular, evaluate teaching techniques used by paraprofessionals, some of whom may utilize obsolete techniques which are masked by use of new equipment.

FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
HARRY N. RIVLIN, DEAN

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Function No. 51-1-6455

# AN EVALUATION OF THE STATE URBAN EDUCATION PROGRAM

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "GUIDANCE 'INTERIM' CLASS PROGRAM"

Prepared by

ROBERT HURLEY
Evaluation Director

An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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INSTITUTE FOR RESEARCH AND EVALUATION

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EVALUATION OF STATE URBAN EDUCATION PROGRAM

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

"GUIDANCE 'INTERIM' CLASS PROGRAM"

## I. INTRODUCTION

This program, a recycling of the previous year's program, was located at P.S. 95, and serviced the entire District. The center was housed in two rooms of the school building, and was serviced by one full-time guidance counselor, two teachers, and two educational assistants working five hours a day for 184 days. The project was designed to help students who had or would have a Superintendent's suspense hearing, or who had returned from state institutions, overcome their educational, social, or emotional disadvantages. The staff was to provide counseling for the youngsters to help them make an adequate adjustment when reassigned to a school; group counseling; liaison with guidance and teaching personnel in the school of reassignment; supportive counseling when in the new school; and help in planning their program. In addition, project personnel was to organize parent education groups; make home visits; and provide remedial work with the students. These activities were to take place during school hours. Audio-visual supplies and materials, programmed learning and workbook materials, and other classroom supplies and materials were to be provided. Approximately 60 children were to be involved.

## II. PROGRAM OBJECTIVES

The following objectives were cited in the district's proposal for funding of this program:

A. To provide suitable special classes and extra services for the temporary placement of children unable to adjust to regular classrooms, and of children who are returning from institutional care. (The extra services were to include small registers, specially trained teachers, educational assistants, and a full-time guidance counselor).

B. To improve the school adjustment of participating children, and to improve the academic performance of participating children via individualized remedial instruction.

C. To provide appropriate school placement for participating children, as indicated by continued adjustment of children in schools to which they are assigned.

## III. EVALUATION OBJECTIVES AND PROCEDURES

This evaluation was undertaken with the specific goal of determining the extent to which the program was successful in attaining its stated objectives. A variety of approaches were utilized:

1. Observation - each classroom was observed four times during the school year (January, February, March, and May). Observers spent the entire school day observing the pupils, the teachers and the educational assistants in an informal manner. No special program or event had been prepared.

2. Interviews of key personnel involved in the program - early in the fall of 1970 informal interviews were conducted with representatives of the District Superintendent's staff, with the District guidance coordinator, with the guidance counselor assigned to the project, and with the two teachers and the two educational assistants. In late May and early June of 1971, the latter six staff members were again interviewed to determine their evaluation of the program, and their suggestions for improvement.

3. Interviews with pupils - a total of eleven pupils who had been served by the program during this academic year were interviewed in order to determine their evaluation of their experience. It had been hoped that more pupils could be interviewed, but pupils were scattered in their placements, their attendance was not dependable, and school personnel in receiving schools found it exceptionally difficult to set up interviews.

4. Ratings of pupil adjustment by receiving school personnel - rating scales designed to elicit data relevant to pupils'academic and social adjustment, attendance and the adequacy of information provided by project staff members were sent to designated personnel in six receiving schools in the district where thirteen pupils had been enrolled subsequent to their experience in the project. Information was returned by five schools relative to nine pupils.

5. Analysis of test scores - Form W of the Stanford Reading Test was administered to fifteen students upon their entry to the project, and Form X was administered to them prior to their return to regular school programs in an effort to assess the extent of change in their reading ability scores.

6. Analysis of official records - records maintained by programs personnel were analyzed to obtain data on sources from which pupils were referred, length of stay in the program, attendance, and post-program placement.

## IV. PROGRAM IMPLEMENTATION

The Guidance Interim Class Program was a continuation of a program that had been in existence since February, 1969, and the staff this year was the same as last year's. The program started promptly in September and continued to function smoothly throughout the present year.

The program as implemented served four kinds of pupils:

1) Children returning from institutions. The program provided a "half-way house" for these children.

2) Children who received 2-5 day principal's suspensions from the various district schools. The program afforded these children a place in school while they were awaiting placement in another district school.

3) Children who were awaiting a superintendent's suspense hearing. Without this program, these pupils would have gone immediately to another school, or would have been on the streets. This program gave them the opportunity of a positive educational experience, and gave pupil personnel staff ample time to observe the pupils in order to make recommendations to the superintendent that were in the best interest of the child.

4) Self-referrals. Because this was an established program, some parents had experienced or heard of its benefits, and had requested that their child be placed in it. This placement had been made where the staff felt it was appropriate and feasible.

A summary of the number of children served by the program is presented in Table 1.

TABLE 1

Number of Pupils Admitted and Discharged and Maximum Number on Register Each Month During School Year 1970-71, Guidance Interim Classes, P.S. 95 Bronx (to June 1, 1971)

NUMBER OF PUPILS

| | Admitted | Discharged | Maximum on Register during Month |
|---|---|---|---|
| September | 3 | 0 | 3 |
| October | 6 | 0 | 9 |
| November | 5 | 1 | 13 |
| December | 3 | 3 | 13 |
| January | 7 | 5 | 15 |
| February | 7 | 6 | 16 |
| March | 7 | 8 | 15 |
| April | 2 | 3 | 14 |
| May | 6 | 4 | 16 |
| | 46 | 30 | |

The three children on register in September were returnees from institutions. As the school year progressed, the number on register increased.

It should be pointed out that the above figures include both classes, and that the program currently serves boys only.

## V. PROGRAM EFFECTIVENESS

This section will be organized on the basis of the various procedures utilized in the evaluation. Summaries will be presented of the results of a) classroom observation, b) interviews of key personnel, c) interviews of pupils, d) pupil adjustment ratings by school personnel in receiving schools, e) analysis of pre and post program reading scores, and f) analysis of official records.

a) Classroom Observations

Four observations were made in each class. During these eight visits, attendance ranged from 3-5 in each class. Some pupils were tardy, but this could be explained by the fact that many of the boys must travel quite far by mass transit. The teachers and the educational assistants exhibited warmth and patience consistently, and seemed to be always ready to answer questions raised by the pupils. The morning hours were devoted to limited group instruction in skill areas, but the bulk of this time was spent in one-to-one or, at most, three-to-one instruction and practice. The boys' attention wandered frequently, but the adults were generally able to bring it back to the desired tasks. The boys usually went to lunch at 11:15. Physical recreation generally followed lunch. Although on two of the visits it preceded lunch. Many of the boys became quite emotionally involved in the physical activities, mainly basket ball. Success seemed inordinately important to them. Male staff members, who played along with the boys, exerted a quieting influence on them, and sometimes endeavored to draw a parallel between the games and the pupils' lives. Staff members of both sexes also used this time to talk quietly with youngsters who were not participating in the games. The afternoon hours were generally devoted to crafts, games, reading and assigned academic tasks. Again, the adults worked on a personal basis with the boys.

Supplies seemed adequate - texts, workbooks, flash cards, games, arts and crafts materials, reading labs., maps, etc. were all in evidence and in use. Audio-visual aids were not apparent. Bulletin boards, both in the classrooms and in the Counselor's office prominently displayed examples of the boys' work.

During these classroom visits the counselor in the projec' was observed to function as a relief for the teachers during their lunch; as a source of help to the teacher when pupils acted out; as a source of information to the students in matters of transportation and placement; as a confidante of the boys; as a liaison with receiving schools; and as an adviser to the teachers in matters relating to the pupils' background, symptomology, and treatment. The professional staff frequently met informally at the end of the school day to discuss the behavior and progress of particular students. The whole team, both professional and paraprofessional members, functioned smoothly, and exhibited genuine concern for the welfare of the boys.

In summary, it can be said that the classroom functioned well. The program provided the youngsters with a positive experience with adults who were providing needed remediational rehabilitation.

b) Interviews with Key Personnel

Each staff member interviewed was asked to rate the facilities on a five point scale. The mean rating was 3.0, with a range from two to four. Some staff members felt that the classroom for the junior high school age boys should be located in a junior high school both because of the boys' size and because facilities for industrial arts training would be available to them.

Staff members were then asked to rate the equipment and supplies available to them on the same five-point scale. The mean rating was 4.25, indicating a high degree of satisfaction. Two staff members felt they should have more supplies for arts and crafts.

The remainder of the interview consisted of two questions: What do you see as the major strengths of the program? and What improvements would you suggest?

The interviewers were extremely candid and positive toward the program. The interviews will be summarized under Program Strengths and Suggestions for Improvements.

Program Strengths

Although each interviewer spoke with a different emphasis, staff responses generally reflected the objectives of the program. Small registers fostered a one-to-one relationship which is important for both remediation and rehabilitation. Children who may have had unsatisfying experiences in large class settings were given the opportunity to enter into close inter-personal relationships with school personnel and to experience success and acceptance. Further, the smaller registers provided closer supervision and encouraged adherence to rules. This latter feature was especially important to junior high school boys, who will eventually be placed in a school setting that requires adherence to rules, because of the freedom explicit in its structure. Most expressed satisfaction with the location of the classrooms, because of their proximity to the District office which provided easy access to BCG personnel. Some thought, however, that this advantage was obviated by the fact that this school was quite remote from the homes of many of the boys, thereby making impossible the kind of parental involvement in the

program they would have liked.

All felt they were helping the boys by providing a half-way house for institution returnees or by providing a positive educational experience for boys awaiting suspension hearings who might otherwise be on the streets while awaiting disposition of their cases. Because they felt they were being helpful, job satisfaction was high, although some admitted feeling frustrated at times by the boys' erratic behavior.

Suggestions for Improvement

The main improvement suggested was the addition of a third teacher who would rotate between classrooms to relieve the other teachers. Such an addition would free the counselor from the task, enabling him to devote that time to his other duties, provide the opportunity for team teaching, drawing on the strengths and interests of all three teachers, and eliminate the need for substitute teachers. This new teacher was visualized as one who would be skilled in arts and crafts. A further suggestion is that the older boys be at least transported periodically to a junior high that had industrial arts facilities, if the site of the class could not be moved to such a school.

c) Interviews with Pupils

Interviews were conducted with three students who had been placed in regular schools subsequent to their experience in the program, and with eight students who had been in the program for at least fifteen days. Seven of the eleven reported that they learned more in the Interim Class Program, while eight said they liked the program better than regular classes. Those who didn't like it better said they missed their friends and didn't like the children in the program because they played around too much. All eleven felt that somebody on the staff was trying hard to help them, and seven felt that everybody with whom they came in

contact was either trying to help them learn more or to help them solve their "problem." All mentioned frequent informal contact with the counselor, and six said they saw him in his office regularly. Six of the boys mentioned difficulty in getting along with their classmates in the Interim Class Program.

d) Pupil Adjustment Ratings

Rating scales were sent to designated personnel in six receiving schools where thirteen boys had been enrolled subsequent to their experience in the Guidance Interim Program. Information was returned from five schools relative to nine pupils. Receiving school personnel was asked to provide ratings and/or data relative to pupils' academic and social adjustment, their attendance, and the adequacy of data from and subsequent contacts with Guidance Interim Program staff.

Academic and Social Adjustment

Receiving school personnel were asked to rate pupils' academic and social adjustment based on their experience with students of similar backgrounds on a rating scale; excellent = 5; very good = 4; good = 3; fair = 2; and poor = 1. Ratings of achievement ranged from 1 to 4, with a mean of 2.2; ratings of behavior toward staff members ranged from 2 to 5, with a mean of 3.7; ratings of behavior toward peers ranged from 1 to 5 with a mean of 3.1. It would seem that these nine students, in general, behave well toward peers and staff members in receiving schools, although their achievement level was lower than one might hope.

Attendance

Receiving school personnel provided both data and ratings of pupils' attendance in their schools. The nine pupils were enrolled in the register of the receiving schools for a total of $527\frac{1}{2}$ days.

They were in attendance for a total of 284 days, a percentage of 53.8%. Thisis lower than the percentage attendance in the Guidance Interim program, but about the same as the average attendance in "600" schools. Staff members' ratings of this attendance, on the same scale described above, ranged from 1 to 3, with a mean rating of 1.6.

Adequacy of Data and Contacts

Information was received relative to eight boys in this area. The usefulness of the data received from the Guidance Interim staff and the quality of subsequent contacts with the staff, each received a mean rating of 4.38, with a range of 3-5 on the Scales described above. All eight responding personnel from receiving schools indicated that they had had contact with Guidance Interim Program personnel subsequent to the pupils' enrolling in their schools. The number of such contacts ranged from 3-10. These data indicate a high degree of satisfaction on the part of receiving school personnel with the quantity and quality of admission and follow-up contact with the Guidance Interim Program.

e) Analysis of Pre and Post-Program Reading Scores

Fifteen of the thirty boys who were reassigned to district schools were given alternate forms of the Stanford Diagnostic Reading Test upon their entry into the program and just prior to their transfer. The boys' average stay in the program was six weeks. Grade placement ranged from 5-9. The mean raw score on the pre-test was 35.40, on the post-test the mean raw score was 36.53. The mean difference score was 1.75 and the standard deviation of the mean difference was 2.03. Computation of

a t-test yielded a t of .223 which indicates that the difference between means does not exceed the expectations of chance. There is no evidence to suggest that pupils' reading scores were improved by the Interim Class Program. All but one of the students' scores were below grade level when they entered the program, and the same was true when they left it.

f) Analysis of Official Records

An examination of attendance records revealed that the mean number of days on the program register was 39.4 days. Forty-two students were on register a total of 1643 days. They were present a total of 1233 days, yielding a percentage of attendance of 74.9 per cent, rather high when compared to a 50 percent average for the city's "600" schools. An inspection of Table 2 will reveal that only five of the 42 boys averaged less than 60 per cent attendance. Two boys had been present every day, one for 13 days and one for 24 days.

TABLE 2

Attendance Percentage for Boys Enrolled in the Guidance Interim Class Program

| Attendance Percentage | Number |
|---|---|
| 90 - 100 | 9 |
| 80 - 89 | 14 |
| 70 - 79 | 4 |
| 60 - 69 | 10 |
| 50 - 59 | 1 |
| 40 - 49 | 0 |
| 30 - 39 | 1 |
| 20 - 29 | 2 |
| 10 - 19 | 1 |
| 0 - 9 | 0 |
| | 42 |

The attendance data reflects a high degree of pupil satisfaction with the program, especially in light of the distance that some were required to travel.

The program's guidance counselor who was responsible, for placing the boys in district schools, kept detailed records of each boy including dates of counseling sessions. Each boy received individual counseling at least once a week, some every day. Some pupils also met for group counseling with a BCG social worker assigned to the District. In addition, an Interim Class report was sent to the receiving school when a boy was transferred. These reports were, in essence, staff evaluations and contained such information as pupils' scholastic strengths and weaknesses, relationships with peers and adults, personal strengths and weaknesses, duration in program, attendance data, and recommendations.

Follow-up data was also kept by the counselor. Table 3 presents data relative to all pupils who have been served by the program since its inception in February, 1969.

Table 3

Follow-up Data on All Students Enrolled in

Guidance Interim Class Program (February, 1969-May 31, 1971)

| | Number |
|---|---|
| Currently on Class Register | 16 |
| Currently on Home Instruction | 3 |
| Re-admitted to Institutions | 8 |
| Re-suspended after school placement | 5 |
| Moved out of district | 11 |
| Graduated from district junior high schools | 15 |
| Currently in special schools | 18 |
| Currently in junior high schools | 30 |
| Currently in elementary schools | 5 |
| Total | 111 |

If the "success" of the program is to be measured by the number of pupils still in school or graduated from district schools - a stern measure in this case - it can be seen that the "success rate" of the program is 84 out of 111 or 75.7 per cent, an exceptionally high rate considering the population served.

## VI. RECOMMENDATIONS

The program has now been in operation for two and one-half years, and procedures are well established. However, some recommendations can be made based on the observations of the evaluation team and the remarks of the program staff.

1. The Guidance Interim Class Program has demonstrated its importance and value and should be continued.

2. The program should be expanded to include at least one section of girls.

3. Identification of children who might benefit from such a program should be made early in the school year. Class registers for this program are low for the first two months of the school year.

4. The practice of obtaining pre and post - program measures of reading ability instituted this year should be continued and expanded to other skill areas.

5. An additional teacher should be added to the staff to provide opportunity for teacher relief and team teaching.

6. The class schedule should be altered to provide a greater variety of experiences for the pupils. Total time devoted to academic pursuits should at least remain the same, but the intervals should be shortened and interspersed with shorter games and crafts activities in recognition of the pupils' limited attention span.

7. More extensive group counseling procedures should be undertaken in order to foster peer adjustment.

FORDHAM UNIVERSITY
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EVALUATION OF STATE URBAN EDUCATION PROGRAM

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

# "BILINGUAL - BICULTURAL PROGRAM"

Prepared by

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An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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INSTITUTE FOR RESEARCH AND EVALUATION

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EVALUATION OF STATE URBAN EDUCATION PROGRAMS

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

"BILINGUAL - BICULTURAL PROGRAM"

## I. INTRODUCTION

The Bilingual - Bicultural Program provided services to the children of District 10 under two components, each under the direction of a Bilingual Coordinator assigned to the District office. One component was a recycling and expansion of a program which was in its third year, and which provided instruction in Spanish to class groups composed of children of Spanish-speaking and non-Spanish speaking backgrounds. The second component was an English as a Second Language program, instituted when it became apparent to the bilingual coordinator and the principals of the several schools involved that a sudden sharp increase in the number of non-English speaking children enrolled had occurred. The program was expanded, then, to encompass this English as a Second Language component.

The Spanish as a Second Language Component of the program aimed to erase the subtle feelings of shame concerning their foreign language background frequently sensed in children learning English as a second language; to develop positive attitudes toward second language learning and toward other cultures among all children; to encourage maintenance of bilingualism among the children, and to improve self-image and self-identity for Spanish-speaking children.

## II. PROGRAM OBJECTIVES

The objectives of the program, as stated in the proposal for funding, were as follows:

1. To have class groups composed of non-Spanish children and children of Spanish background learn basic conversational Spanish.

2. To develop positive attitudes toward language learning among non-Spanish children.

3. To improve the attitudes of children of Spanish background toward themselves and their activities.

4. To develop, among members of the Spanish-speaking community, a greater sense of identification with the school.

The English as a Second Language component sought to teach English to non-English speaking pupils, increasing their ability to participate in class activities in English and thus to accelerate their academic growth. Emotional support was also to be provided to these children during their period of orientation and language learning through the reassuring presence of a bilingual adult in the school to whom these children could turn with questions and problems regarding their new environment.

## III. EVALUATION OBJECTIVES AND PROCEDURES

The objectives of the evaluation of the Program paralleled the program objectives, including the implicit objectives of the ESL component. The evaluation sought to determine the extent to which:

1. participating children learned basic conversational Spanish
2. non-Spanish children developed positive attitudes toward language learning
3. children of Spanish background improved in their self attitudes
4. members of the Spanish community developed a greater sense of identification with the school
5. non-English speaking children increased in their ability to speak English
6. non-English speaking children increased in their ability to participate in class activities using English as a second language

The procedures employed in the conduct of the evaluation were:

1. Observation of the on-going program in a sample of eight (72.2%) of the 11 participating schools

2. Interviews with the bilingual coordinator and with the paraprofessional staff in sample schools

3. Observation of two training sessions conducted at the district office

4. Analysis of materials utilized in the Program

5. Analysis of questionnaire responses of principals, bilingual personnel, and classroom teachers of participating personnel, including ratings of program effectiveness

6. Ratings by classroom teachers in regard to the ability to engage in class activities in English of pupils before and after participation in the ESL component.

## IV. PROGRAM IMPLEMENTATION

### Personnel

In order to provide for the smooth expansion of this program into several schools, and for its successful coordination, a bilingual teacher was assigned as program coordinator. She carried out the responsibilities of curriculum design, selection, preparation and distribution of materials, personnel recruitment and assignment, orientation and training of the paraprofessional staff, and coordination of project activities with administrators, classroom teachers and auxiliary teaching staff in the several schools. She functioned, also, as a liaisonbetween the district, the schools, and the community in relation to this program.

These responsibilities were fulfilled in an on-going process through the school year. Although recruitment proved to be somewhat more difficult than had been anticipated, a total of 23 bilingual educational assistants and 3 interns from the Central Board of Education's Program "Recruitment and Training of Spanish-Speaking Teachers" were assigned to work under the program in 11 elementary schools in the district by the end of the school year. To keep pace with the need for training of the continually growing staff, an assistant coordinator was appointed on a half-time basis during the Spring term.

A total of 18 (78.3%) educational assistants and interns responded to a questionnaire eliciting information regarding their educational background. Table 1 summariizes this data.

TABLE 1

EDUCATIONAL BACKGROUND OF BILINGUAL STAFF

| Years of Schooling Completed | N | Per Cent |
|---|---|---|
| Two years of High School | 1 | 5.6 |
| Three years of High School | 3 | 16.7 |
| High School Diploma | 5 | 27.8 |
| Some College Work | 4 | 22.2 |
| Two years of College or More | 4 | 22.2 |
| Degree from Four Year College | 1 | 5.6 |

A total of five (27.8%) of this group received their education in Puerto Rico, one (5.6%) in Cuba, two (11.1%) in Puerto Rico and in New York City, and 10 (55.6%) in New York City or elsewhere in the States.

A total of six (33.3%) educational assistants had no previous experience as a school employee, seven (38.9%) had one or two years of experience as a teacher aide, educational assistant, family assistant, or school volunteer. The most experienced group of five (27.8%) worked previously as teacher aide (3 years), classroom teacher in Puerto Rico (2 years), educational assistant (5 years) classroom teacher in Cuba (5 years) and school volunteer (18 years). Most of the staff members new to the school had previous work experience in the commercial field as secretary or bookkeeper. A total of six (33.3%) were mothers of children attending the school to which they were assigned.

English as a Second Language Component (ESL)

In this component of the program, small groups of non-English speaking pupils were taught conversational English through the audiovisual approach by bilingual paraprofessionals. All the paraprofessionals and most of the children were Spanish speaking. In most cases, the ESL lessons were conducted daily, for 45 minutes, to small groups of 4 to 10 pupils, depending on grade level.

In only one school, a small room was made available for use in the ESL component of the Bilingual-Bicultural Program. In three schools, classes were conducted in the back of the children's own classroom. In other schools, the cafeteria,auditorium, gymnasuim, teachers' room, indoor yard or corridor were used. In many cases, it was necessary to change locations on different days or during different hours of the day depending on the availability of space.

Materials were plentiful in most cases, although lack of private or permanent space or storage facilities limited use of materials requiring equipment or hardware, or materials designed for individual use. Picture cards were used most extensively to stimulate conversation and build vocabulary and sentence patterns. Tape recorders, games, phonographs, audiophones, charts, and other materials have been distributed although the full value of these materials has not yet been exploited in the program.

The paraprofessional instructors screened children, arranged their groups and schedules, planned and conducted their lessons with a minimum of supervision. In six of the eight sample schools, the principal or assistant principal assisted with planning, methods, and materials. In the other two schools, little assistance was provided from administrators in the schools. Workshops were conducted at the District office, including a series of six weekly sessions conducted in April and May.

The instructors who conduct their lessons in the children's classrooms reported that the classroom teachers helped them in lesson planning, methods, and materials, and that the opportunity to discuss the progress of individual pupils was of tremendous help. Those instructors who took pupils out of the classrooms however, reported that little or no help was rendered by the classroom teachers of participating pupils.

Of the 47 classroom teachers of participants who responded to a questionnaire, 31 (66.0%) reported that they had not participated in planning the ESL instruction at all and several indicated that they had not been asked. A total of twelve teachers (25.5%) participated to some degree, while four (19.2%) participated to a great extent.

More than half the teachers (25, or 53.2%), in fact, reported that they had never even observed the lessons. Involvement of the classroom teachers, then, was minimal.

In addition to conducting ESL lessons, the instructors were called upon to contact non-English speaking parents, to serve as translator, to help in registration and placement of newly arrived children, and to serve as a resource person to guidance personnel in regard to the needs of the Spanish-speaking community.

Data were obtained from 47 classroom teachers in eight schools regarding the single pupils in their classes who received ESL instruction. A total of 26 (55.3%) pupils arrived in New York from a non-English speaking area in 1970 or 1971. A total of 15 (32.0%) pupils were born here or had arrived during their pre-school years; these children were in early childhood (K-2) classes, and spoke a foreign language exclusively at home. Three pupils (6.4%) participated despite longer residence in New York City; their teachers noted that their problems stemmed from reading difficulties rather than inability to comprehend oral English. Four teachers were unable to supply this information about their pupils.

All but six (87.2%) of the pupils spoke Spanish; the others were of Chinese, Yugoslavian, Rumanian, Greek, and Portuguese background.

Table 2 presents data regarding the number of pupils served in six participating schools at various grade levels.

TABLE 2

TOTAL NUMBER OF PUPILS SERVED IN

ESL COMPONENT IN SIX SAMPLE SCHOOLS

| Grade Level | School P.S. 26 | P.S. 33 | P.S. 46 | P.S. 59 | P.S. 91 | P.S. 9(79) | Total |
|---|---|---|---|---|---|---|---|
| K | 0 | 0 | 5 | 24 | 20 | 0 | 49 |
| 1 | 30 | 20 | 3 | 33 | 20 | 9 | 115 |
| 2 | 23 | 6 | 3 | 24 | 10 | 25 | 91 |
| 3 | 8 | 15 | 4 | 23 | 18 | 15 | 83 |
| 4 | 14 | 8 | 4 | 10 | 5 | 7 | 48 |
| 5 | 7 | 5 | 8 | 4 | 12 | 8 | 44 |
| 6 | 5 | 8 | 3 | | 11 | 9 | 36 |
| Total | 87 | 62 | 30 | 118 | 96 | 73 | 466 |

Once accepted into the program, few children were dismissed, unless it was found that the children's difficulties were those of reading or other perceptual problems, rather than lack of knowledge of English. In nearly all cases, children entered the program knowing virtually no English, and it was determined that they needed the support of the program for at least the full school year.

Most pupils, although they spoke little or no English when they entered school, were placed in classes with many other children who spoke their native tongue. The teachers reported that from 2 to 23 pupils in their classes spoke a language other than English; the average was 14.3 children. Ratings by the participating pupils' classroom teachers in regard to their abilities in English will be presented in a later section of this report.

Spanish as a Second Language Component

This component of the Bilingual-Bicultural Program constituted a recycling and expansion of the program of the same name which operated in P.S. 85 for the previous two years. Although the Spanish as a Second Language (SSL) Program formed the basis for the initial proposal, the English as a Second Language (ESL) component was implemented early in the school year in most schools, while the expansion of the SSL program was delayed until additional funding was obtained and suitable personnel was recruited later in the year.

In this program, "lessons in conversational Spanish were taught to total class groups by bilingual paraprofessional personnel. In P.S. 85, four such paraprofessionals gave this instruction; of these, three had been a part of the program since its inception. These paraprofessionals, who worked under the supervision of the T.E.S.L. in that school, were also called upon to fulfill many other school duties, such as those performed by personnel assigned to the ESL component.

Thus, only a portion of their time was allotted to the Spanish instruction. In each of the five other schools (P.S. 26, 33, 59, 9/115 and 9/79), one person was assigned to begin the teaching of Spanish to intact classes. Three of these people were interns in the "Recruitment and Training of Spanish Speaking Teachers" program, and had completed most, or all, of a college degree program. Most of the classes taught in each of the five newly participating schools were third through sixth grade classes. In P.S. 85, first and second grade classes also participated.

Lessons were presented from two to five times weekly, for 10 to 30 minutes depending on grade level. The content of the conversational lessons, in general, consisted of vocabulary and sentence patterns revolving around themes of everyday objects, holidays, the calendar, etc. The instructors used commercial materials and other materials they had constructed or brought from home in their work. Most lessons were taught in a highly structured, formal manner, with little pupil-pupil interaction. Songs and games, however, were included.

## V. PROGRAM EFFECTIVENESS

### A. Training and Supervision of Personnel

It should be noted that the success of this program was particularly dependent on the individual skills and dedication of the personnel involved, including the newly appointed bilingual coordinator, whose duty it was to recruit, assign, and train personnel, develop curriculum, and select and order materials.

In the opinion of the evaluation team, the work of the coordinator was of superior quality. In the interim report on the Bilingual Bicultural Program, it had been noted that the training of the paraprofessionals assigned needed additional attention. In response, a bilingual teacher was assigned as Assistant Coordinator to work with the paraprofessionals, additional workshops and conferences were conducted at District headquarters for them, and the administrators of the several schools took a more active role in their supervision. Although it had been proposed (in a modification of the original proposal) that professional personnel were to be employed, it proved virtually impossible to recruit additional professionally trained bilingual teachers. The background of education and experience of the bilingual paraprofessionals varied greatly, as did their effectiveness in their positions. Most paraprofessionals noted the need for further training in methods and the use of materials. The problems which arose however, may be attributed to difficulties in recruiting, assigning, and training a staff of this type for a rapidly expanding program.

Principals were asked to rate the quality of training and supervision received by the staff; most indicated the need for more, rather than different, training and supervision of the bilingual personnel (Table 3).

TABLE 3

RATINGS BY PRINCIPALS (N=9) OF QUALITY OF TRAINING AND SUPERVISION RECEIVED BY BILINGUAL PERSONNEL (IN PER CENT)

| | Excellent | Good | Fair | Poor | Very Poor |
|---|---|---|---|---|---|
| Training | 22.2 | 22.2 | 44.4 | 11.1 | |
| Supervision | 11.1 | 44.4 | 44.4 | | |

B. English as a Second Language Component

This component, despite the fact that it had been implemented without the benefit of a prior period of planning, staff selection and training, may be seen as effective. Most teachers whose pupils participated were enthusiastic about the program, and felt that it filled a great need for the children in helping them to learn English more quickly while providing security and support from a friendly, sympathetic adult. Spanish-speaking children, in addition, had the opportunity to express themselves in their own language and to ask questions about and discuss problems in regard to their new environment which they might be too shy to ask a classmate. The instructors achieved excellent rapport with the children and, in most cases, a high degree of respect from the teachers, which is unusual for sub-professional personnel. Most teachers were concerned over the inadequate facilities afforded the program in most schools, and with the lack of time for consultations between classroom teachers and the bilingual instructors.

Teachers and principals were asked to rate the quality of the instruction provided by the bilingual staff. Of the nine principals responding, five (55.5%) rated the instruction as "excellent," while four (44.4%) assigned ratings of "good."

Of the 47 teachers responding, 17 (36.2%) rated the instruction as "excellent," 22 (47%) as "good," six (12.8%) as "fair," and three (6.4%) as "poor" or "very poor." It must be noted, however, that few teachers had observed the program. Some of the teachers assigning low ratings felt that the instruction should be in remedial reading, which was not the intent of the program.

Teachers were asked to assign ratings to their participating pupils on a Scale for Rating Pupil Ability to Participate in Class Activities Using English as a Second Language. Ratings were assigned from 9, the highest rating, to 1, the lowest rating, with 5 representing an average rating. Table 4 presents the means of these ratings of pupils prior to participation and in May, and the mean growth of the pupils in these areas.

TABLE 4

MEAN RATINGS ON THE SCALE TO RATE PUPIL

ABILITY TO SPEAK ENGLISH

| | Prior to Participation | End-of-Year Rating | Mean Growth |
|---|---|---|---|
| Understands and follows directions | 2.2 | 7.0 | 4.8 |
| Converses with classmates | 2.3 | 5.8 | 3.5 |
| Follows class lessons | 1.6 | 5.0 | 3.4 |
| Carries through assignments | 1.7 | 4.8 | 3.1 |
| Initiates conversations | 1.6 | 4.9 | 3.3 |
| Asks questions | 1.5 | 4.6 | 3.1 |
| Volunteers information | 1.3 | 4.3 | 3.0 |
| Volunteers opinions | 1.2 | 3.2 | 2.0 |
| Completes homework | 2.5 | 5.5 | 3.0 |
| Works up to capacity | 2.1 | 5.1 | 3.0 |

These ratings demonstrate that, in the perception of their teachers, the pupils improved in their ability to use English in the classroom.

Reservation had been expressed in the interim report regarding the use of paraprofessionals in an English language program, many of whom speak English with an accent and have had little school-related experience or training. It became apparent, however, that the main advantage for the pupils was the psychological support provided by the bilingual adults and the opportunity to learn English in a small group, rather than total class situation.

Teachers, asked to consider the advantages of the program, cited the following areas in which the children benefited:

TABLE 5

ADVANTAGES OF THE ESL COMPONENT, AS PERCEIVED BY TEACHERS (N=47)*

| | N | Per Cent |
|---|---|---|
| Small group instruction with others with similar needs | 8 | 17.0 |
| Individual instruction and attention from warm adult | 9 | 19.2 |
| Guidance, psychological support | 8 | 17.0 |
| Greater socialization with peers | 4 | 8.5 |
| More rapid English learning | 7 | 14.9 |
| Development of self-confidence | 5 | 10.6 |
| Instruction through translation | 3 | 6.4 |
| Opportunity to communicate with bilingual adult | 6 | 12.8 |

*Some teachers cited more than one advantage

In a rare expression of unanimity, all persons involved with the program found the program to be of value to the pupils, despite the common resentment expressed by many teachers regarding the use of para-professionals in a teaching capacity in other programs.

The dedication and warmth of the staff, who managed to overcome the obstacles of inadequate space and insufficient orientation to gain the respect of teachers in each school merits withdrawal of the reservations previously expressed. The effectiveness of the program component, despite its difficulties, must be rated as highly effective.

C. Spanish as a Second Language Program

In order to determine the extent to which the objectives of this component were met, classroom teachers of participating pupils were asked to rate the effectiveness of the Spanish lessons in meeting each objective. Table 6 presents the distribution of these ratings, assigned by teachers in four of the six participating schools.

TABLE 6

RATINGS BY CLASSROOM TEACHERS (N=14) REGARDING EFFECTIVENESS OF SSL COMPONENT IN MEETING ITS OBJECTIVES

| Objective | Rating | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Excellent | | Very Good | | Good | | Fair | | Poor | |
| | N | % | N | % | N | % | N | % | N | % |
| Helping children accept linguistic and cultural differences | 1 | 7.1 | 4 | 28.6 | 4 | 28.6 | 4 | 28.6 | 1 | 7.1 |
| Helping Spanish and non-Spanish children to communicate | 1 | 7.1 | 3 | 21.4 | 3 | 21.4 | 4 | 28.6 | 3 | 21.4 |
| Increase academic motivation of Spanish children | 1 | 7.1 | 2 | 14.3 | 4 | 28.6 | 3 | 21.4 | 4 | 28.6 |
| Increase self-worth of Spanish children | 3 | 21.4 | 6 | 42.9 | 4 | 28.6 | | | 1 | 7.1 |
| Opportunity for success for Spanish children | 4 | 28.6 | 6 | 42.9 | 1 | 7.1 | 2 | 14.3 | 1 | 7.1 |
| Development of pride for Spanish children | 5 | 35.7 | 5 | 35.7 | 2 | 14.3 | 1 | 7.1 | 1 | 7.1 |
| Helping non-Spanish children learn Spanish | 3 | 21.4 | 2 | 14.3 | 3 | 21.4 | 2 | 14.3 | 4 | 28.6 |
| Improve attitudes of non-Spanish children toward language learning | 4 | 28.6 | 5 | 35.7 | 2 | 14.3 | 1 | 7.1 | 2 | 14.2 |
| Helping members of Spanish community identify with school | 3 | 21.4 | 3 | 21.4 | 4 | 28.6 | 1 | 7.1 | 3 | 21.4 |

It will be noted that the teachers generally did not consider the program highly effective, except in the area of developing a sense of self worth, pride, and success in Spanish children. It was not felt, however, that the program, despite the development of positive self-attitudes among the Spanish pupils, increased their academic motivation.

Most teachers, also, considered the program ineffective in teaching Spanish to non-Spanish children. Most of the lessons, it should be noted, were taught in a very formal, teacher-dominated manner. In many cases, it was noted by observers and teachers that the Spanish children tended to dominate the lessons. The instructors reported that the children, of both Spanish and of non-Spanish backgrounds were "highly involved and enthusiastic," "or interested and attentive," when asked to rate the children's degree of involvement, while classroom teachers of these pupils reported, on the average, a somewhat lesser degree of involvement with the instruction on the part of both groups of children. Both groups of adults, however, noted that the Spanish children were, in general, more enthusiastic about the program than the non-Spanish children.

Although effective in improving the self-attitudes of Spanish children, one must question whether the techniques used in the program might not accomplish this objective at the expense of equally valuable aims. Several teachers noted that their non-Spanish children, particularly their black pupils, resented the Spanish lessons. As noted by one teacher, "the black children in my class resented the emphasis on Spanish and refused in all cases but one to participate in the program. This split between the Spanish and blacks caused great difficulty."

Whether this resentment stemmed from problems in Puerto Rican - black relationships in the local community, or feelings of failure in the Spanish instruction in contrast with the success experienced by the Spanish children (who, from a child's eye view may have an "unfair" advantage) has not been determined. It is important to note that the program was conceived as one which was to help foster improved inter-group relationships, and not to reward one group at the expense of the other. Therefore, it must be concluded that the program was unsuccessful in this regard, although potentially beneficial when used as a springboard for improved relationships and understanding among the children by sensitive teachers.

## VI. PROGRAM STRENGTHS AND WEAKNESSES

### Strengths of the Program

A. ESL and SSL Components

1. The dedication, enthusiasm, and hard work of the staff

2. The rapport of the staff with pupils and teachers

3. The psychological support afforded non-English speaking children while learning English

4. The flexibility and openness to suggestion of the project personnel. Changes were made in the light of perceived needs in individual schools, and at the recommendation of the evaluator. A suggestion made in an interim evaluation report regarding another program, recommending use of bilingual personnel from this program to accompany classes with non-English speaking children on trips was also put into effect.

5. The self-pride which developed in Spanish speaking pupils who participated in the SSL component.

Weaknesses of the Program

A. English as a Second Language Component

1. Inadequate facilities in most schools.

2. Insufficient personnel to meet the perceived needs of the school.

3. Delayed training program for personnel.

4. An inherent problem, rather than a weakness, is the difficulty in providing for consultations between the classroom teachers of the various pupils and the program's personnel. Where ESL lessons are conducted in a corner of a classroom, this problem did not occur; however, the distractions and sounds of other classroom lessons interfered somewhat with the ESL sessions.

B. Spanish as a Second Language Component

1. The formal structure of the Spanish lessons which prevent, in most cases, pupil interaction and mutual assistance in language learning.

2. The danger of increasing intergroup tensions, rather than decreasing them. Methods of averting these pitfalls and turning them into assets should be explained to teachers.

## VII. RECOMMENDATIONS

A. Selection and Training of Personnel

1. Increase the number of personnel with professional training in second language learning to provide assistance, supervision, and coordination of the program. These staff members need not be bilingual.

2. Publish and distribute a regular newsletter to all project personnel, administrators, classroom teachers, parents and other interested persons and groups. Encourage newsworthy and creative contributions from all participants including pupils. Letters from the coordinator can stress the attitudinal aspects of the program. This newsletter can also publish notices and schedules of workshops, courses, and meetings regarding the program and the proposed Title VII bilingual program at P.S. 59. This newsletter may well be considered to have a training function, as well as that of disseminating information, and should be in Spanish and English.

3. Provide a summer pre-service training program for participating personnel.

B. English as a Second Language

1. Classroom teachers should be encouraged to take an active role in this program and, considering their enthusiasm, involvement should not be difficult to achieve. Perhaps a committee of teachers might be best able to provide the direction needed by the paraprofessional staff in methods, materials, selection, placement and evaluation of pupils, and coordination with teachers, and might help to work out ways to overcome problems in space, storage, and scheduling.

2. Workshops or in-service courses in the teaching of English as a Second Language should be offered to teachers whose classes include pupils who are learning English as a second language, including those who speak English with some facility.

3. Experiment with different techniques for providing and facilitating English instruction. Upper-grade pupils, high school students who attend late sessions, and volunteers might be used to extend the services provided. Earphones might be used in in-class ESL sessions to eliminate aural interference. Forms might be developed to facilitate interaction between classroom teachers and paraprofessionals, if time cannot be allotted for the instructors to meet with the classroom teachers on a frequent and regular basis.

4. Emphasize the purpose of the ESL lessons to teachers; remediation of reading difficulties should not among the functions expected of the staff.

C. Spanish as a Second Language

1. Provide orientation for teachers of participating classes regarding responsibilities for planning with instructor, assisting in implementing varying techniques of classroom organization and instruction, and providing follow-up in intergroup relations and Spanish conversation in the classroom.

2. Limit Spanish instruction to classes whose teachers are able to fulfill these responsibilities. In classes whose teachers do not appreciate the value of the program in providing opportunities to develop understandings among the children, the program may have negative effects.

3. Experiment with different methods of Spanish instruction at varying levels. An after-school program in Spanish Conversation, and one in the reading and writing of Spanish for bilingual pupils may well draw an excellent response. The use of upper-grade pupils to assist in small-group Spanish lessons in lower grade classes might be considered.

FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
HARRY N. RIVLIN, DEAN

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# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "LIVING SCIENCE PROJECT"

Prepared by

LEONARD BRICKMAN
Evaluation Director

An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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INSTITUTE FOR RESEARCH AND EVALUATION

JOSEPH JUSTMAN, DIRECTOR

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EVALUATION OF STATE URBAN EDUCATION PROGRAMS

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

"LIVING SCIENCE PROGRAM"

## I. INTRODUCTION

The LIVING SCIENCE PROJECT developed in District 10 is a project in which an attempt is made to introduce children to living animals using the Bronx Zoological Park as their source. A follow up of each of several visits to the zoo is made by the Project Directors, and discussions concerning the animals, their needs and background, and their environment is undertaken with teachers and children.

The procedures that were developed in the program this year were the result of a previous year's experience, criticism by teachers and administrators who had participated in the program previously, and a report evaluating the program the previous year.

The procedure this year consisted of six themes that were offered to all of the children who participated in the program. These children were all of the children in the fifth grade of six selected schools. These schools were selected because they contained large numbers of underprivileged students. The schools selected for this program were as follows: Public School 26, 32, 33, 59, 85, and 91.

The director of the program and her associate designed the program so that the following experiences were available to the children:

1. There was material to be used by the classroom teachers before the students came to the Zoo.

2. A presentation at the Zoo by the program director or associate describing the theme that was to be developed.

3. A visit to one or more Zoo houses where this theme was developed further.

4. Follow-up by classroom teachers on the return to the school.

5. Follow-up within a short period of time by project director or associate in visiting each class that had been to the Zoo.

The six themes that were developed for the program for the 1970-71 school year are the following:

1. Environmental Conservation

2. Biotic Zones: The Temperate, Deserts, Rain Forest, Deciduous Forest

3. Adaptations to Land-Reptiles-Amphibians

4. Animal Coverings

5. Animal Communication

6. Reproduction

In addition, by means of a series of conferences with the teachers involved in the program and with the administrators of these six schools, it was hoped that further information and follow-up would be developed in these areas.

## II. PROGRAM OBJECTIVES

The following objectives were cited by the district in their request for funding:

1. To increase the awareness of fifth grade children of the role of science in our society, particularly as related to ecology, by means of learning experiences involving trips to the Bronx Zoo and related lectures, films, and classroom demonstrations.

2. To motivate children to greater classroom participation and to more successful performance in related subject areas such as language arts and social studies.

3. To motivate children towards more successful classroom participation (by providing especially appealing curricula materials in the form of live animals).

## III. EVALUATION PROCEDURES

A number of different approaches were utilized in evaluating the extent to which the program attained its stated objectives:

1. Observation of the on-going program - attention was directed to scope and sequence of program, nature of demonstrations, quality of materials used, provision for pupil activity, opportunities for questioning, etc.

2. Analysis of curriculum materials - to determine coordination of materials with New York City course of study, gradation, adaptability to individual differences, etc.

3. Interviews with project personnel - to determine basis for selection of experiences, evaluation of strengths and weaknesses of program, reaction to demonstrations, etc.

4. Questionnaire to classroom teachers - to determine reactions to learning experiences provided, evaluation of project materials prepared for use by classroom teacher, etc.

5. Analysis of scores on test dealing with the role of science in our present-day society administered to random sample of participating and non-participating fifth grade children.

6. Interviews with and questionnaires to a sample of participating pupils - to determine attitudes to program, self, school subjects.

## IV. PROGRAM IMPLEMENTATION AND EFFECTIVENESS

District 10, Bronx, consists of a large number of schools. The six schools chosen for this project contained the largest number of children with culturally different populations. These six schools, at the end of the school year, had a population of 992 students. Of these, 70.6% were black and Puerto Rican students: 39% of this total were Puerto Rican and 31.6% were black. Of the total population of black and Puerto Rican children, 56% were Puerto Rican and 44% were black.

The proportion of black and Puerto Rican children in each school varied as follows:

| | | |
|---|---|---|
| P.S. 26 | 70% black and Puerto Rican | 30% other |
| P.S. 32 | 42% black and Puerto Rican | 58% other |
| P.S. 33 | 58% black and Puerto Rican | 42% other |
| P.S. 59 | 92% black and Puerto Rican | 8% other |
| P.S. 85 | 85% black and Puerto Rican | 15% other |
| P.S. 91 | 72% black and Puerto Rican | 28% other |

These six schools had a total of thirty-five fifth grade classes. All of these children were new to the project since none of them had been in the fifth grade the previous year. With the exception of some children who transferred during the school year or who were absent for the trips to the Zoo, all of these children had the opportunity for the six visits to the Zoo and to observe the Zoo houses when they visited.

Of the thirty-five classroom teachers who were involved in the project, seventeen were new to the project because they had not taught a fifth grade class the previous year. Eighteen had been teachers on the fifth grade level and, therefore, this was the second year that they

were involved in the project. The relationship between new and experienced teachers varied from school to school. In P.S. 32, of the six teachers in the fifth grade, only one was new to the project. In P.S. 85, there were six teachers in the fifth year, all of whom were new to the project.

Observation of the activities organized for the children at the Zoo indicated that each visit was carefully planned to make full use of the half-hour allocated to the presentation. Charts, slides, and films were constantly available to make a visual impact. Each of the presentations involved participation by some of the students in the programs. Ample time was allowed for questions by the students and teachers so that they understood specifically what they would see in their visit to the Zoo house. Because of the shortness of time, the presentations were brief and very intense. The two classes then broke into groups for the visit to the specific Zoo houses. The director and associate director generally took the largest groups and the two teachers took smaller groups into the houses to be observed. In the early part of the year, there was an attempt to keep each group in a class situation and children were reprimanded if they attempted to go off on their own. However, in the second part of the year, the children were allowed to select any of the four groups and allowed to go off on their own as they found something of interest. This resulted in much more excitement and involvement on the part of the children.

In the classroom follow-up which took place several days later, a great deal of emphasis was placed on trying to develop some project which would demonstrate the theme that had been presented at the Zoo. In some cases, material additional to what the students had already seen was presented. In others, special projects in which the children could participate were developed. A series of meetings with the tea-

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chers attempted to do real teacher training in the field of living science. By the end of the year, even the most reluctant teacher was willing to have some sort of living science project in her classroom. Several of the teachers indicated that at the beginning of the year they had not thought this possible.

The program demonstrated the advantage of a second year on a project. Most of the rough spots that teachers had complained about in the previous year had been overcome. In evaluation of the 1969-70 project, the evaluator was extremely critical of the fact that the people at the Zoo presented material that was not on the children's level. The program was very carefully redesigned so that all of the material is on the fifth grade level. The programs aroused a great deal of interest in the students. It is appropriate at this time to discuss one device used to arouse interest in one of the themes. The director brought in a large shopping bag and asked the students to come up from the audience, put their hand in the shopping bag, and bring out some object. Each of these objects had to do with animal coverings. Some were hair from animals, some were nails, some were scales, etc. Each child, as he brought out one of these objects, became very excited and became the envy of those sitting in the audience. This device aroused a great deal of excitement on the entire theme.

To what extent did the Living Science Program fit into the fifth grade science curriculum which is used in the New York City schools? The New York City Board of Education syllabus (1968 edition) recommends that eight topics be covered in fifth grade science. An analysis of the Living Science Program indicates that two of these topics, Little Environments and The Green Thumb, are more than adequately covered by

this program. Some of the material in the topics, Climate, and The Sun's Family are also covered in the Living Science Program. However, none of the material in the topics How Man Changes Materials, Mirrors, Making It Go, and Batteries and Bulbs is touched upon. In discussing this with the regular science teachers in two of the schools in the program, both indicated that the interest of the children was so much turned to the concept of living science that they were not able to complete the other material recommended for the fifth grade. In both cases they attempted to offer the students other science material, and except for an occasional lesson that was well motivated, the children preferred to work on the living science projects. These projects, because they were living material, took a great deal of time; and the science teachers reacted to the children's interest by creating many living projects for them in the science room. In each case, the science teachers took advantage of this interest to develop projects that were far beyond the normal activities that they would have developed without this program.

Not only were there many examples of living material, but also in many cases there were fairly sophisticated experiments which were being performed by the youngsters. For example, there were experiments in variations in feeding of both plants and animals, experiments on the effect of pollutants on both plants and animals, experiments on the effect of temperature and other variations on living things. The science teachers indicated that the program had made the science program of the entire school more interesting, not only to the fifth grade, but also for other children in the school. The science teachers found that the sixth grade students who had been in the program the previous year

were still vitally interested in the living science experiments that were being performed by this year's group of fifth grade students.

The problem of individual differences of students was met in the development of student projects. Some of the students designed sophisticated environmental projects; others were content with expressing their interests in art work and development of dioramas. In each class, individual project books were kept by the children; these reflected the areas of interest of each child.

Two questionnaires were directed to fifth grade teachers during the course of the program. The first, administered at mid-year, sought to determine how effective the program had been up to that time in reaching the children. This questionnaire was completed by 35 teachers, although not all teachers responded to every question. Their responses are summarized below:

1. Did the Zoo teachers hold the interest of the children?

   All: 17 Most: 16 Few: 0

2. Were the lectures at children's level?

   Above: 0 Good: 32 Below: 0 Written in-Outstanding: 2

3. Did you find the Zoo safari (children in small groups) involved them more?

   Yes: 17 No: 10

4. Did the Zoo teachers hold the interest of the children?

   All: 8 Most: 22 Few: 1

5. Were there behavioral difficulties with your class at the Zoo?

   Many: 1 Few: 33 Written in None: 1

6. In classroom visits, did the Zoo teacher hold the interest of the children?

   All: 28 Most: 7 Few: 0

7. Were demonstrations at children's level of interest?

   Above: 2  Good: 29  Below: 0

8. Resource material at school, have you found these helpful? 21

   Have you used many? 19  Have you used none of them? 3

9. How have children expressed their interest in the program?

   Reading: 21, Creative Writing: 18, Research: 13,

   Reporting: 7, Social Studies: 17, Art: 19

10. Are children showing a growing awareness of environmental problems?

    Yes: 31  No: 0

11. Have parents shown interest in program?

    No: 7  Don't know: 17  A few: 2

This questionnaire also asked whether the teachers had used any of the lesson plans prepared for use in the project. Only 2 teachers in the group of 35 noted that they had not used such lesson plans, 15 indicated that they had used at least one plan, and 18 replied that they had used most of the plans.

The teachers also reported that some of their children were involved in projects growing out of their visits to the zoo. These included recycling of cans and paper, the writing of a play, the displaying of the material, the setting up of living projects, and the making up of booklets.

At the end of the school year, a second questionnaire was directed to these same teachers. Twenty-three teachers responded. A summary of their responses is presented below:

1. How did you find the mechanics of getting the children to the Zoo? Were they satisfactory? Yes 78.3% No 21.7%
2. Did you find the presentation at the Zoo interesting and use-

ful to the students? Yes 100% No_____

3. Did you find the trips to the various Zoo houses of value to your students? Yes 100% No_____
4. Would you say that your students showed a great deal of interest in living things? Yes 100% No_____
5. Did this interest carry over into other subject areas? Yes 96% No 4%
6. If "yes," what subject area(s) Reading-36%, Social Studies-59%, Language Arts-66%
7. Did you have a live animal project of some sort in your classroom? Yes 65% No 35%
8. Did you find that the trips to the Zoo presented a serious problem in discipline and control? Yes 8.7% No 82.6% Sometimes 8.7%
9. Did you find that the Living Science Program enlarged your information about living things? Yes 100% No_____
10. Did you think the curriculum materials used were valuable to the children? Yes 100% No_____

It is evident that the program had had a marked effect on the children. In interviews with the teachers and in observations of teacher conferences, it became increasingly clear that there was a great deal of enthusiasm for the project. As the year wore on, the teachers became more and more involved, and those teacher conferences that were observed in April and May indicated greater interest on the part of the teachers than those that were seen earlier in the school year. With one or two exceptions, teachers asked for assistance in setting up classroom projects. The Director and Assistant Director were very

helpful in providing such assistance.

In response to a request for suggestions concerning the program, the following recommendations were made: (a) More Zoo trips. (b) More films for classes. (c) More classroom visits by the Living Science team. (d) Zoo houses should be open for the school group only. (e) The program should have a full day at the Zoo. (f) There should be a workbook for each child.

It was felt that it would be of interest to send a questionnaire concerning the program to sixth grade teachers, many of whose children had been in the program during the previous year. While responses were received from only 10 sixth grade teachers, the responses merit reporting.

Eighty per cent of the children in classes of these sixth grade teachers had been in the program during the previous year. Half of the respondents felt that there was carry-over from the previous year's science program. Teachers indicated that the students were greatly interested in animals and pets, and that, in those classes where there were living animals, they were very carefully taken care of by expert hands.

Four of the 10 respondents felt that attendance of the children in the project during the previous year was reflected in better performance during the present year. These teachers saw evidence of such carry-over in Language Arts and Social Studies.

It was also deemed worthwhile to determine whether the program permeated downward in the school. To this end, a questionnaire was sent to fourth grade teachers. Replies were received from 18 of the 36 teachers to whom they were sent.

1. How did you learn about the Living Science Program? Please check:

   Conference 9.5%

   Teachers involved 71.5%

   Students 19.0%

2. Have your students spoken of this Living Science Program in your class? Yes 33% No 67%

3. Have you had any live animal project in your class during this past school year? Yes 50% No 50%

4. Would you be good enough to ask your class this question when it is convenient. "How many of you have gone to the Zoo this year? 39% average; Range - 12% to 61%

5. In view of what you have heard about the Living Science Program from others, do you think it would be valuable for your present students when they are in the fifth grade? Yes 90% No 10%

It is evident from these responses that news about the program had spread among fourth grade teachers, and that a sizeable proportion of the children in their classes were aware of it, and spoke of it in class. It would appear, too, that the teachers had heard favorable reports concerning the program, since almost all of the respondents reported that they felt that it would be valuable to introduce the program on the fourth grade level. At the present time, a relatively small proportion of fourth grade children visit the Zoo; the program, if extended as the teachers desire, would certainly broaden their experiential background.

A questionnaire was also completed by the principals and assistant principals in the participating schools. Their responses are summarized below:

1. Do you feel that this Living Science Program has been an asset to your school? Yes 100% No _____
2. Do you feel this program has improved the science program in your school? Yes 93% No 7%
3. Is there any evidence that this Living Science Program has been effective in helping students in other subject areas?
   Yes 87% No 13%
4. If "yes," what subject area(s)? Reading-47%, Social Studies-27% Language Arts-47%
5. In speaking with your fifth grade teachers, what percent indicated how they feel about the program? all 100%
6. Of those expressing an opinion, what percent were satisfied with the program? Varied %
7. Do you think that the basics of the program have been given to all of the teachers in your school? Yes 33% No 67%
8. In view of the fact that children are out of school on six or seven trips do you feel that this program is worthwhile and should be continued? Yes 93% No 7%
9. In view of the Living Science Projects developed as a result of this program, do you feel that science teaching in the entire school has been improved? Yes 67% No 33%
10. What suggestions do you have for improving this program in the coming years?
    1. More grades should have program-10
    2. All teachers should have access to films, materials, etc.-3

Again, the responses are very favorable. Indeed, if the responses of all of the groups of teachers and supervisors are taken as a whole,

it becomes quite clear that, insofar as the professional staffs of the schools were concerned, the program was functioning excellently, and had a markedly favorable impact on students.

What was the reaction of the pupils and their parents? To obtain some data in these areas, a questionnaire was prepared in both English and Spanish and distributed to pupils, and through them to parents. Of 601 questionnaires that were distributed, 246 were returned; this represents a return rate of 40 per cent. Responses to the questionnaire are summarized below:

TO THE STUDENT

During this school year, you were part of the Living Science Program at the Bronx Zoo. You visited the Zoo many times and you did projects in your class. Would you help us to find out some facts about this project? (Please check answer).

1. Did you ever go to the Bronx Zoo before this term began? Yes 86%
   No 12% Don't Know 2%
2. Have you gone to the Zoo this year without the class? Yes 50%
   No 50%
3. If "yes," how many times? 3.3 times for 50% who had gone.
4. Have any of the members of your family gone to the Zoo this year?
   Yes 57% No 3%
5. Which of the trips that you took this term did you like the best?
   House of Darkness-35, Monkeys-36, Birds-9; Lions-12.
6. Did you think that you usually had enough time at the Zoo on each trip? Yes 53% No 47%
7. Do you speak of your trips to the Zoo at home? Usually 53%
   Sometimes 41% Hardly Ever 6%
8. Do you think your school work has improved because of the Living

Science Program? Yes 98% No 2%

9. If "Yes," what subject area(s)? Please check: Mathematics 19%

Language Arts 9% Social Studies 18% Art & Music 13% Science 70%

Please ask your parents or guardian to answer the questions below:

TO THE PARENTS OR GUARDIAN

Your child has been part of a class that has visited the Zoo several times this term. Would you be good enough to answer the following questions about the trips. (Please check):

1. Did your child talk about his trips at home? Yes 97% No 3%

2. Do you think your child was more interested in school this year than in previous years? Yes 82% No 6% Not Sure 12%

3. Did your child talk about a pet or bringing a living animal home this year? Yes 80% No 20%

4. Do you think the Living Science Program helped your child at school? Yes 89% No 0 Not Sure 11%

It was surprising to note that a relatively large proportion, 14 per cent, of this group of fifth grade pupils, had not been to the Bronx Zoo prior to the current school year. Most encouraging was the indication that 50 per cent of the pupils reported Zoo attendance on their own, not as members of a class. Indeed, those who had visited the group without class participation reported having done so an average of 3.3 times. More than half of the respondents indicated that members of their family had visited the Zoo. The Monkey House and the House of Darkness proved to be the two most popular of the exhibits visited, but it is important to note that smaller groups choose each of the houses visited by their classes as their favorites.

All but a handful of the pupils felt that the program had contributed to improvement of their school work; in this, they were joined by the great majority of the parents. The results indicate that the children did discuss their trips with their parents. Again, the impact of the program, in terms of pupil motivation, was high.

Another way of gauging pupil interest involves a consideration of pupil attendance, after looked upon as an indication of pupil attitude. A summary of pupil attendance in the fifth grade in the participating schools is presented in Table 1. Attendance data for the fourth and sixth grades in these schools is presented for comparative purposes. Data were available for four schools.

TABLE 1

Rates of Attendance of Pupils in Participating Schools

| | Attendance Rate | | |
|---|---|---|---|
| School | Grade 5 | Grade 4 | Grade 6 |
| 32 | 88.1 | 86.4 | 87.7 |
| 85 | 88.1 | 87.5 | 84.3 |
| 33 | 89.2 | 89.6 | 89.5 |
| 26 | 88.0 | 87.7 | 88.7 |
| Total | 88.6 | 88.0 | 87.9 |

For the total group of pupils, attendance on the fifth grade level was slightly higher than that in the other grades.

In order to determine whether the program contributed to growth in science understandings, pre - and post-tests were prepared by the Directors and Assistant Director of the program. Although worded differently, parallel questions on both tests covered similar ground. The pre-test was administered to the pupils before their first visit to the Zoo; the second during the last week in April, when more than three-fourths of the program had been completed. The results are presented in Table 2. Data were available for five schools.

TABLE 2

Mean Scores of Pupil in Participating Schools on Test of Science Understandings

| | Pre-Test | | Post-Test | |
|---|---|---|---|---|
| School | N | Mean | N | Mean |
| P.S. 59 | 116 | 58.2 | 125 | 67.3 |
| 91 | 128 | 56.1 | 132 | 65.4 |
| 85 | 119 | 53.2 | 125 | 63.5 |
| 33 | 106 | 61.2 | 106 | 75.2 |
| 26 | 181 | 59.1 | 159 | 69.2 |
| Total | 650 | 57.6 | 647 | 67.9 |

For the group as a whole, a gain of 10.3 points on the 46 items comprising the test was noted. This represents a gain of slightly more than 20 per cent. In view of the small number of visits to the Zoo that were taken by each class, this may be looked upon as a substantial gain in science learnings.

Changes in pupil performance on the test may also be considered in terms of the number of items to which a significantly greater proportion of the pupils gave the correct answer. These data are reported in Table 3.

TABLE 3

Number of Items to Which Pupils in Participating Schools Gave Correct Answer on Test of Science Understandings

| School | Number of Items | Per Cent of Total Items |
|---|---|---|
| P.S. 59 | 17 | 37.0 |
| 91 | 22 | 47.8 |
| 85 | 20 | 43.5 |
| 33 | 30 | 65.2 |
| 26 | 21 | 45.7 |
| Total | 32 | 70.0 |

Again, the data are indicative of appreciable growth on the part of the participating pupils.

## V. PROGRAM STRENGTHS AND WEAKNESSES

This section of this report may well be presented in terms of answers to a series of questions:

1. To what extent were effective learning experiences provided?

The presentation at the Zoo was considered to be a highly effective learning experience by the observers. The visual aids provided, which included fims, charts, slides, were very well conceived and presented to the children. In addition to the visuals, the participation by the children in these presentations was carefully planned. In each of the presentations, students were asked to come to the platform and participate in some way in making the presentations to the others. In one of the presentations that was observed, more than a dozen students were

brought to the platform as participants. In addition, the children were encouraged to ask questions of those who were giving the presentation. This resulted in a great deal of participation because many of the presentations developed into a series of questions by the students and answers given by those presenting the material. In interviews with the children, they indicated how enjoyable these presentations had been to them.

The visits made to the various houses at the Zoo was also considered an effective approach to learning. Starting in January, the children were allowed to group themselves and move from exhibit to exhibit freely. When they had some question concerning what they were observing, they then asked the teachers to explain what it was. This resulted in a very informal movement through each Zoo house; the children were able to observe those things which were of particular interest to them. The informality of this presentation was highly motivating.

Both the director and co-director of the project made follow-up visits to the classrooms of the children who had visited the Zoo. They brought with them living examples of the particular theme that they had discussed at the Zoo. The children were asked to observe the animals, handle them, and to ask any questions they wished concerning the living habits and needs of the animals. These visits gave the children an opportunity to reinforce their learning experiences at the Zoo. Again, a very effective approach.

Classroom Teachers used materials that were left by the project coordinators to continue carrying out the general theme. These included films, slides, library materials, and other materials designed by the project directors. With the classroom follow-up, it gave further opportunity for the children to effectively put together the many concepts and principles that had been developed concerning the theme.

As a result of the tremendous interest involved in presenting these learning experiences, there was an increase in the number of classroom projects in which the children were involved. So great was the interest, that 65% of the fifth grade teachers found it essential to have a live animal project of some sort in the classroom. Not only were the live animal projects developed, but also other projects with plants in which various ecological conditions and their effect upon growth was emphasized. One fascinating project that was developed was the use by the children of a cigar smoking teacher to develop a pollution project. They requested that their teacher blow cigar smoke into a terrarium and then they observed the effect of this over a long period of time. Their report on this project was so unusual that it has received publicity in the press.

2. Were effective instructional techniques utilized?

From the above description, it is evident that many effective instructional techniques were utilized. The most effective was the project; each classroom developed projects that had to do with living animals and living things. In addition, many classes used art projects to further develop the themes. Some made drawings; others dioramas demonstrating the habitat in which the animals lived. The one instructional technique which was seriously questioned by the teachers was use of the films that were available. Many teachers thought that these were not quite suitable for the theme or for the children involved. In addition, they felt that other techniques, such as the visits by the directors, were far more effective than any film could be.

3. Did the program increase the awareness of the participating children? There is every evidence that the participating children because more aware of many of the concepts developed in the project. The teachers spoke of the fact that the children were very much involved in those ecological problems and principles which had been developed. Some of the projects were related to the ways by which the earth had been affected as a result of some ecological imbalance. Reports from teachers and parents, and from the pupils themselves, give evidence of a high degree of interest. The test data, and reports from teachers, indicate that there was considerable growth in science understandings.

4. Were the children motivated to greater classroom participation? There is every evidence that they were so motivated, particularly in science projects. Not only were the living animal and plant projects visible in each classroom visited, but bulletin boards and display cases all showed evidence of this interest. In many classes, art work was developed around animal and plant forms. In other classrooms, dioramas were created to show the environmental conditions under which different animals live. There was no question that participation by the students was greater in these areas.

5. Did the children show more successful performance in related subjects? The evidence for this is indicated in the results from the fifth grade teachers and principals and assistant principals. Thirty-six per cent of the fifth grade teachers and two-thirds of the administrators indicated they thought the children had carried over their interest into Reading. In the Language Arts, 66 per cent of the fifth grade teachers and 47 per cent of the administrators thought the interest had carried over. Both groups indicated that they thought there had been a carryover into the Social Studies part of the program. Fifty-nine per cent of the fifth grade teachers indicated carryover

there; and 27 per cent of the administrators agreed with them.

## VI. RECOMMENDATIONS

1. It is recommended that this project be continued and, if possible, expanded to other schools in the District.

2. Techniques used in the project should be utilized by other classes planning to visit the Zoo to obtain maximum success with such visits.

3. A similar program should be developed for sixth grade children in the district, many of whom will have been part of the present fifth grade project.

4. An attempt should be made to spread the basic concepts of the Living Science project among all the teachers in the District.

5. Bus and Zoo schedules should be rearranged to allow the project children at least an hour in the Zoo houses before the public is admitted.

FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
HARRY N. RIVLIN, DEAN

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Function No. 51-1-6458

# EVALUATION OF STATE URBAN EDUCATION PROGRAMS

## DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

## "DEVELOPMENTAL PROGRAM IN PERSONNEL AND CURRICULUM"

Prepared by

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Evaluation Director

An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended).

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EVALUATION OF STATE URBAN EDUCATION PROGRAMS

DISTRICT 10, NEW YORK CITY BOARD OF EDUCATION

"DEVELOPMENTAL PROGRAM IN PERSONNEL AND CURRICULUM"

## I. INTRODUCTION

This program, a joint venture of District 10 and Lehman College, had two components. The Teacher Training Component sought to develop in college students (72 sophomores, juniors, and lower seniors) an understanding of the needs and interests of the disadvantaged child, and of the techniques by which he might be reached. By providing student teachers to work with children in small groups and on a one-to-one basis, the program attempted to give underachievers a greater opportunity to adjust to school and to improve their academic work. The program was designed to make the training of college students more relevant to the reality of the classroom and to the type of child they would teach in the public schools in large urban areas. It was felt that this program would help bridge the gap between what the college student learns in teacher training courses and what he sees and does in the classroom.

Under the direction of the teacher-in-charge assigned, techniques were to be explored, via video-tapings of lessons, for maximizing effectiveness of individualized approaches, with the assistance of supportive personnel (consultants) in all curriculum areas. Workshops were to be held for cooperating classroom teachers. Provision was made for an educational assistant and a school aide to assist the teacher-in-charge and the cooperating classroom teachers.

In the Curriculum aspect of this program an attempt was made to provide learning resources and experiences designed to affect the achievement, attitudes, health, and behavior of the children disadvantaged by poverty in the District. (There were approximately 11,000 children from grades K-9 so designated in the District). To this end, high impact curriculum materials were to be designed and prepared, selected and purchased, distributed and circulated. The program sought to involve the participation of teachers and pupils working together in the creating and use of instructional materials of an innovative and experimental nature.

Two school aides were to be hired to assist in the production of materials and general operation of the Resource Center. A messenger was to be employed full time to circulate materials to the schools and back to the center. A school secretary was to provide clerical services. The Resource Center was to be coordinated by the District Audio-Visual Supervisor.

## II. PROGRAM OBJECTIVES

The objectives of the program, as stated in the proposal for funding, were as follows:

1. To develop in prospective teachers an understanding of the needs of the disadvantaged child and knowledge of techniques and materials to meet these needs.

2. To improve the achievement of pupils through the use of high impact curriculum materials designed by and distributed through a Learning Resource Center.

## III. EVALUATION PROCEDURES

The evaluation design for the Developmental Program in Personnel and Curriculum sought to determine the extent to which each of the two components of the Program were implemented and the extent to which the objectives were attained. In order to determine the effectiveness of Part I of the Program in developing an understanding of the needs of the disadvantaged child among prospective teachers and to provide underachievers an opportunity to adjust to school and to be better able to learn by providing student teachers to work with them both in small groups and on a one-to-one basis, the following techniques were employed:

1. Observations by qualified observers of the on-going program throughout the school year. Special attention was directed to the nature of the activities engaged in by the prospective teachers, scope and sequence of the workshops, and liaison between college and school personnel.

2. Questionnaires to and interviews with participating student teachers, college instructors, and public school personnel involved in the program to determine their specific roles in the program, the extent of planning, the effect on the participating college students, and their reactions to the program.

3. Analysis of official records to determine the extent of participation in the program.

In order to determine the effectiveness of the Learning Resource Center in developing and distributing curriculum materials and to assess the extent to which the use of these materials had an effect on pupils, the following techniques were employed:

1. Observations of procedures used at the Resource Center and analysis of newly developed materials.

2. Interviews with the Coordinator and personnel assigned to the Center.

3. Questionnaires to classroom teachers using materials made available by the Learning Resource Center.

4. Analysis of official records to determine the extent of utilization of the Center by school personnel.

## IV. IMPLEMENTATION OF THE PROGRAM

### A. Teacher Training

#### Participants

A study of the Teacher Training component of the program revealed that only 22 sophomores participated in the program. These sophomores were assigned to Public School 26 in the Bronx. There was also a small group of Juniors and Lower Seniors in Public School 26 and Public School 94, an outgrowth of last year's program. However, the major attention, during this year, was given to the 22 sophomores, in the belief that a more effective job could be accomplished if the concentration were on this limited number.

#### Activities

As part of the training program the 22 sophomores were in the public school all day on Mondays and for the morning on Thursdays, where they were assigned to a specific classroom in which they had the opportunity to observe and teach. For the first semester, the sophomores were assigned to the primary grades; for the second semester, to the upper grades. They were in the classrooms generally from nine until eleven and

from one until two. Twelve cooperating teachers were involved in the program; in general, each was assigned two sophomores.

Each sophomore was video taped twice during the year. After each lesson, the coordinator of the program, who also performed the video-taping, analyzed the lesson with the student. The focus of the analysis was on the student's methods and techniques in presenting the lesson, on the materials used, and on teacher-pupil interaction. During the second half of the year more emphasis was given to the study of the child in the learning-teaching situation.

Twice during each semester, the sophomores engaged in group analysis of a video-taped lesson given by one of their peers.

During the final week of the program, the sophomores were given the opportunity to plan a visit to one of the many community agencies utilized by District 10.

Most of the participating sophomores visited a community agency. Each student chose to visit either the Juvenile Court, Jacobi Hospital, or the Davidson Community Center.

The Social Studies specialist accompanied the students to the Juvenile Court and the coordinator of the program visited Jacobi Hospital with another group of students. Those who visited the Community Center did so on their own.

During the follow-up discussion, which took place on the Thursday following the Monday visit, the sophomores shared their observations, asked questions, and exchanged ideas. Twelve sophomores attended the follow-up session. The other students were unable to attend because they were taking final examinations at that time. The coordinator of the program and the Social Studies specialist led the discussion.

170 During the second half of the term the sophomores made a visit to the Learning Resource Center where they examined materials and were able

to ask questions about curriculum materials available.

Table 1 indicates the types of activities engaged in by the sophomores while in the classrooms and the degree to which they participated in them, as reported by the student teachers and their cooperating teachers.

Table 1

Degree of Participation in Activities, as Reported by 20 Sophomores and 8 Cooperating Teachers (in Per Cent)

| | TEACHERS | | | SOPHOMORES | | |
|---|---|---|---|---|---|---|
| Activity | Not at All | To Some Extent | To a Great Extent | Not at All | To Some Extent | To a Great Extent |
| Observing | | 62.5 | 37.5 | | 35.0 | 65.0 |
| Teaching Whole Class | 25.0 | 75.0 | | 5.0 | 65.0 | 35.0 |
| Teaching Small Group | | 37.5 | 62.5 | 10.0 | 70.0 | 20.0 |
| Tutoring Individual Pupil | 12.5 | 75.0 | 12.5 | 15.0 | 85.0 | 10.0 |
| Participating in a Lesson Given by Teacher | 12.5 | 87.5 | | 35.0 | 60.0 | 5.0 |
| Clerical Work | 100.0 | | | 55.0 | 40.0 | 5.0 |
| Other | | | | | | |
| Developing a Unit | | | | | 5.0 | |
| Housekeeping | | | | | | 5.0 |
| Accompanying Class on Trip | | | | | 5.0 | |

It is quite clear that the student teachers and the cooperating teachers looked upon the nature of student teacher participation in class activities somewhat differently. Evidently, the student teachers felt that they were spending more time in observing and in teaching a whole class than did the cooperating teachers, while the reverse was true concerning the amount of time devoted to teaching small groups.

Instruction Provided by College Personnel

Eight instructors from Lehman College provided services for the participating sophomores. Methods courses were conducted in the school in conjunction with the field experiences and took place between 11 a.m. and 12 p.m. and between 2 p.m. and 3 p.m. The courses were taught by eight curriculum specialists from Lehman College. The number of hours given to each subject area is given in the following chart:

Language Arts - 14
Social Studies - 14
Social Foundations - 14
Science - 14
Math - 14
Psychology - 14
Music - 7
Art - 7
Seminars - 8

The course sessions took place in a classroom in the basement of the school.

In addition to teaching the methods courses, the college personnel engaged in other activities. Table 2 presents the activities and ratings of these activities as given by the college personnel.

TABLE 2

Activities Participated in by College Personnel and Their Ratings of Each Activity

| Activity | No. of College Personnel Involved | Excellent | Very Good | Good | No Rating |
|---|---|---|---|---|---|
| Workshop sessions | 5 | 3 | 2 | | |
| Demonstration lessons | 3 | 2 | 1 | | |
| Conferences with school supervisory personnel | 6 | 4 | 1 | 1 | |
| Analysis of video-taped lessons given by students | 4 | 2 | 1 | 1 | |
| Other: Individual conferences with students in relation to the preparation of lessons | 1 | 1 | | | |
| Conference with classroom teacher | 1 | | | | 1 |
| Acted as reference person for students' video-taped lessons | 1 | | | | 1 |
| Field trip to Community Agency | 2 | 1 | | | 1 |
| Visit to Learning Resource Center | 1 | 1 | | | |

As one would expect when an individual, in effect, is rating the quality of an activity in which he or she is an active participant, the ratings assigned were uniformly "good" or higher.

The instructors at Lehman College also conducted three workshops for cooperating teachers in the school. These workshops dealt with Mathematics, Science, and Language Arts.

Of the eight cooperating teachers who responded to the questionnaire, six replied that they attended the workshop. Of the two who said they did not attend, one reported that she did not know that workshops were being conducted. This teacher had two sophomores in her classroom during the term. One of the teachers who attended the workshops said that they were interesting and informative.

B. Learning Resource Center

The Learning Resource Center was developed as the second component of this program. Of the eight teachers who responded to the questionnaire, three said they used materials from the Center, five had not; one had used the Center to make materials, while seven indicated that they had never developed materials in connection with the Center. One stated that she did not know what the Learning Resource Center was. Another said that no time was provided for the teachers to use the Center. One had used the Center-developed mathematics materials and thought the Center was "terrific."

As stated in the proposal for the program, an educational assistant and a school aide were to be assigned to assist the teacher-in-charge and the cooperating teachers. During the observation of the program no such personnel were involved in Center activities. When asked what assistance they had received from an educational assistant or aide, Five of the eight cooperating teachers who had completed the questionnaire indicated that they had received no services from either; the other three did not respond to the question. During interviews with cooperating teachers it was verified that no assistance from an educational assistant or school aide had been provided.

Numerous curriculum materials were purchased by the program and made available in the school for teachers' use. Analysis of records revealed that approximately twenty-five requests had been made by teachers for use of these materials in their classes. One request had been made by one of the student teachers.

## V. PROGRAM EFFECTIVENESS

### A. The Teacher Training Component

The effectivenss of the program will be presented in the form of answers to the questions posed in the evaluation design.

1. To what extent did the Program help the college sophomores develop an understanding of the needs and interests of the disadvantaged child and ways to meet these needs?

Prospective teachers, cooperating teachers, and college personnel were asked to respond to a series of questions relating to the effectiveness of the program in preparing prospective teachers to teach disadvantaged children. Table 3 presents the frequency distribution of responses of each group.

TABLE 3

Ratings of Effectiveness of Program Made by Prospective Teachers, Cooperating Teachers, and College Instructors (in Per Cent)

| Question | Rating: Excellent | Very Good | Good | Fair | Poor |
|---|---|---|---|---|---|
| To what extent did the Program develop understanding of the needs and interests of the disadvantaged child? | | | | | |
| Prospective Teachers (N=20) | 30.0 | 25.0 | 35.0 | 10.0 | 5.0 |
| Cooperating Teachers (N=8) | 25.0 | 25.0 | 37.5 | 12.5 | |
| College Instructors (N=7) | 42.9 | 57.1 | | | |
| To what extent did the Program develop knowledge of materials and resources to meet the needs and interests of the disadvantaged child? | | | | | |
| Prospective Teachers (N=20) | 25.0 | 30.0 | 35.0 | 10.0 | 5.0 |
| Cooperating Teachers (N=8) | 12.5 | 12.5 | 62.5 | 12.5 | |
| College Instructors (N=7) | 42.9 | 42.9 | 14.3 | | |
| To what extent did the program develop skill in techniques for working with the disadvantaged child? | | | | | |
| Prospective Teachers (N=20) | 5.0 | 25.0 | 30.0 | 40.0 | 5.0 |
| Cooperating Teachers (N= 8) | 12.5 | 12.5 | 62.5 | 12.5 | |
| College Instructors (N= 7) | 14.3 | 57.1 | 14.3 | 14.3 | |

Analysis of the responses in Table 3 indicates that the college instructors rated the effectiveness of these aspects of the program higher than did either the prospective teachers or the cooperating teachers. In general, the cooperating teachers rated these aspects of the program "good," the student teachers "good" to "very good," and the college instructors "very good" to "excellent." It should be noted that all of the respondents gave the lowest rating to the program's effectiveness in developing skill in techniques for working with the disadvantaged child. This was particularly true of the student teachers.

Most of the prospective teachers attributed the program's success in these areas to the fact that they were in a classroom and had the opportunity to observe and work with children. One student teacher indicated that she did not come in contact with many disadvantaged pupils; one cooperating teacher stated that her class, to which two sophomores had been assigned, did not consist of disadvantaged children.

When asked what activities helped them in developing understandings of the disadvantaged child, sophomores gave the following responses:

"The term 'disadvantaged' is very vague. Just being with children has helped me learn more about them."

"Through observation is the only way I've really learned about the disadvantaged child."

"Through trips around this neighborhood with class or friends we have seen what the child has to put up with outside the classroom."

"Just being up there in the classroom with the kids. This in itself has more value than any other activity there is."

"What activities? The only disadvantaged child I saw was in the classroom I was in. And I saw very little of the 'disadvantaged child' for the first semester I was in a 2-2 class and this semester I'm in a 6-1 class."

2. To what extent did the children benefit from the presence of the sophomores in their classroom?

The cooperating teachers and college instructors were asked to respond to questions regarding the effectiveness of the participating sophomores in assisting the children to learn. Table 4 presents a summary of the cooperating teachers' and college instructors' ratings of the sophomores.

TABLE 4

Ratings of Effectiveness of Student Teachers Made by Cooperating Teachers and College Instructors (In Per Cent)

| Area of Competency | Excel-lent | Very Good | Good | Fair | Poor | Don't know |
|---|---|---|---|---|---|---|
| Setting up one-to-one relationships with children | | | | | | |
| Cooperating Teachers (N=8) | 12.5 | 37.5 | 12.5 | 37.5 | | |
| College Instructors (N=7) | 57.1 | | 28.6 | | | 14.3 |
| Giving instruction to small groups of children | | | | | | |
| Cooperating Teachers (N=8) | 25.0 | 50.0 | 25.0 | | | |
| College Instructors (N=7) | 42.9 | 42.9 | 14.3 | | | |
| Giving Instruction to a total class of pupils | | | | | | |
| Cooperating Teachers (N=8) | 12.5 | 25.0 | 37.5 | 25.0 | | |
| College Instructors (N=7) | 42.9 | 28.6 | 28.6 | | | |
| Sharing their enthusiasm with pupils, and fostering a positive attitude toward learning | | | | | | |
| Cooperating Teachers (N=8) | 37.5 | 25.0 | 37.5 | | | |
| College Instructors (N=7) | 42.9 | 42.9 | 14.3 | | | |
| Giving extra attention to pupils, thus developing a positive emotional climate | | | | | | |
| Cooperating Teachers (N=8) | 12.5 | 50.0 | 37.5 | | | |
| College Instructors (N=7) | 42.9 | 42.9 | | | | 14.3 |
| Introducing creative or innovative techniques and materials in the classroom | | | | | | |
| Cooperating Teachers (N=8) | 12.5 | 25.0 | 25.0 | 25.0 | 12.5 | |
| College Instructors (N=7) | 14.3 | 57.1 | 28.6 | | | |

An analysis of Table 4 reveals that the sophomores were rated most favorably in giving instruction to small groups of children, in sharing their enthusiasm with pupils, and in fostering a positive emotional climate. They were rated considerably lower in setting up one-to-one relationships with pupils and in introducing creative or innovative techniques and materials in the classroom, and in giving instruction to a total class of pupils, although it must be pointed out that this latter competency was not a primary objective to be developed in this program. One teacher indicated that there was no individualized instruction in her class.

In general the sophomores were rated more favorably by the college instructors than by the cooperating teachers.

When asked in what ways the participation of sophomores might be made more helpful to the children, cooperating teachers responded that the sophomores should spend more time in the classroom, that an hour or two twice a week was not sufficient to develop continuity or to enable the prospective teachers to get involved to any great degree. The principal suggested that there be more contact between the cooperating teachers and the college personnel in order to guide the experiences being offered to the student teachers. One cooperating teacher commented, "I did as I pleased or thought correct. In the last two years never was I spoken to or advised as to whether or not I'm proceeding correctly." Another teacher noted that there was a conflict between the teachers' schedule and program goals. Another suggested that there be fewer changes in plans and programming by the college administrator.

Analysis of cooperating teachers' comments regarding their perceptions of their role revealed that most veiwed themselves as teacher-guides or advisors. A few were not sure of their roles. For example one cooperating teacher said, "I was quite confused as to my role and still am. I also was quite confused as to what the student's role was."

The participating sophomores suggested that they spend more time in the classroom with the children and that they be assigned to classrooms where they would be guaranteed opportunities to work with children and have varied experiences.

Of the seven college instructors who completed the questionnaire, three offered no suggestions. The suggestions made by the others were that greater opportunity, both in amount and kind, be afforded the sophomores by both the school and college, that the student teachers be assigned specific children on whom they would concentrate their efforts, that they be given more opportunities to work with small groups, and that they be assigned to teachers who group their pupils for instruction.

3. Which activities engaged in as part of this program were of most value to the participating sophomores?

During observations and interviews with the sophomores, it was noted that they considered the actual participation in the classroom the most valuable activity in the program. In responses to a questionnaire, they cited other activities engaged in as part of the program that they considered of value. Table 5 summarizes their open-ended responses.

TABLE 5

Most Valuable Activities Engaged in as Part of This Program as Reported by the Participating Sophomores

| Activity | Response N | Per Cent |
|---|---|---|
| Actual participation in the classroom | 17 | 85.0 |
| Observing and taking part in a lesson given by a professor | 6 | 30.0 |
| Observing pupil's reactions | 4 | 20.0 |
| Teaching a lesson | 4 | 20.0 |
| Working with groups | 2 | 10.0 |
| Observing videotapes and discussing our own and other sophomores lessons | 1 | 5.0 |
| Working with a competent teacher | 1 | 5.0 |
| Helping individual students | 1 | 5.0 |
| Learning about curriculum materials | 1 | 5.0 |
| Visit to the Learning Resource Center | 1 | 5.0 |
| Informal lecturing of our professors | 1 | 5.0 |
| Videotaping of my lesson | 1 | 5.0 |

Analysis of Table 5 indicated that in addition to their classroom assignment the prospective teachers found taking part in lessons given by the college professor, teaching a lesson, and observing pupils' reactions as most valuable.

The students did say that on occasion, their professors had meaningful lessons planned that related to what they were doing in the classroom, but that, in general, the most valuable activities were those which permitted them to work with children.

Videotaping of lessons

Since the video-taping of students' lessons was an integral part of the program the participating sophomores were asked to comment on the value of the activity. During observations of the videotaping sessions and the post lesson conferences, major emphasis was placed on the prospective teachers' effectiveness in teaching the lessons.

More than half of the participating sophomores believed that the video-taping of their lessons was valuable. The following comments are typical:

"I could see my mannerisms and children's reactions to my questions. I saw in the tape a lot of little things the children did."

"We often do not come across as we think we are."

"The video-taping of the lessons showed me exactly how worthwhile my lessons was."

"Seeing each individual taping as the three years elapse will surely show a continuous progression of style, teaching, mannerisms, and abilities. Viewing the videotapes will show this as well as presenting a personal reflection, how you as a teacher handle and are seen by the class. Your mistakes are seen and could possibly be amended in future situations."

"You could actually view what you were like in a classroom situation. While watching it you could count on what you liked and what you didn't like and critically evaluate it. For this semester the emphasis was mainly on how you reacted in front of a class and not how well your lesson went."

The major value attributed to the use of videotapings was that the prospective teacher could see how she reacted in front of a class. A few noted the value of seeing pupils' reactions.

While it is evident that video-taping of lessons provide prospective teachers the opportunity to engage in critical self analysis, one may question the value of the videotapings at this stage of the prospective teacher's training. The major objective of the program was to develop in prospective teachers an understanding of the disadvantaged child, while the purpose of the video-taping component was to "maximize effectiveness of individualized approaches with the assistance of supportive personnel (consultants) in all curriculum areas. Yet an analysis of the sophomores statements indicates that very few if any of the values they recognized could be categorized under the stated objectives. These sophomores did not indicate that, as a result of the videotaping, they were better able to understand the disadvantaged child in terms of learning patterns, levels of motivation, attention span, or the like. Nor did the analysis of their video-taped lessons by the curriculum specialists lead to any greater effectiveness of use of individualized approaches in teaching.

The use of the videotapings was not directed to attainment of the objectives of the program; the prospective teachers saw values other than those anticipated by the program. Evidently an effort must be made to explore other uses of the video-tape recorder in order to assist in achieving the desired goals. Suggestions in this regard will be presented in the section dealing with recommendations.

The sophomores also noted limitations in the use of the videotape recordings. Many felt that the situation was unnatural and that the children's behavior was not typical. Some sample comments follow:

"I feel it becomes too much of a performance and is unnatural in some cases."

"I feel it presents a false setting - the children don't behave as naturally as they would otherwise. I don't feel it helps us to really see any progress."

"In theory wonderful. In some ways very helpful if you want to compare earlier work and later to check progress. I am not convinced though that they are absolutely essential."

"Unnatural experience for children and me. What is taped is not the real thing in terms of children's behavior and my reaction to them."

A session in which the coordinator led a discussion of a video-taped lesson presented by one of the sophomores was observed. The coordinator gave a brief background of the class, played about five minutes of the tape, stopped it, and asked a leading question such as; "What's happening in the room at this point?" The students would give their perceptions and then the coordinator would ask another question.

During the second half of the year, greater attention appeared to be given to the nature of the child in the learning sutuation. For example, the coordinator asked such questions as, "How did _____ keep the class together?" What is the attention span of the children?". The sophomores also considered the effectiveness of the materials used and the sequencing of activities; they suggested alternative procedures.

The analysis centered to a greater degree on aspects of teaching the disadvantaged child, background, language, interests, etc. The sophomores were interested and participated extensively in the discussion. More activities of this kind may be helpful in achieving the program's objectives.

Some limitations were noted in the organization of the sessions. For example, a number of sophomores indicated that they were not aware that they would be viewing a video-taped lesson. In one instance, the student who had presented the lesson was not present during the discussion. Evidently, the session was not planned in advance, since the Social Studies methods course which was being conducted was interrupted in order to show the video-tape.

4. To what extent did the prospective teacher benefit from the Program?

Prospective teachers, cooperating teachers, and college instructors were asked to respond to three questions regarding program effectiveness in assisting prospective teachers to develop techniques for working with individual and small groups of children, to develop a realistic approach to teaching in an inner city school, and to develop feelings of competence to meet future committments in teaching. These goals have been expressed as among the expected outcomes of the program. Table 6 presents a summary of the ratings of the program in this respect.

TABLE 6

Ratings of Effectiveness of the Program in Regard to Developing Abilities in Individualizing Instruction and in Teaching in an Inner City School

(In Per Cent)

| Question | Excel-lent | Very Good | Good | Fair | Poor |
|---|---|---|---|---|---|
| To what extent did the Program develop techniques for working with individual and small groups? | | | | | |
| Prospective Teachers (N=21) | 4.8 | 42.9 | 42.9 | 4.8 | 4.8 |
| Cooperating Teachers (N=8) | 25.0 | 37.5 | 37.5 | | |
| College Instructors (N=7) | 28.6 | 57.1 | 14.3 | | |
| To what extent did the Program develop a realistic approach toward teaching in an inner city school? | | | | | |
| Prospective Teachers (N=21) | 42.8 | 38.1 | 14.9 | | 4.8 |
| Cooperating Teachers (N= 8) | 50.0 | 12.5 | 25.0 | 12.5 | |
| College Instructors (N= 7) | 71.4 | 28.6 | | | |
| To what extent did the Program develop feelings of competence to meet future committments in teaching? | | | | | |
| Prospective Teachers (N=21) | 19.1 | 52.4 | 23.8 | | 4.8 |
| Cooperating Teachers (N= 8) | 12.5 | 12.5 | 62.5 | 12.5 | |
| College Instructors (N= 7) | 42.9 | 42.9 | 14.3 | | |

Prospective teachers indicated that these aspects of the program were accomplished, not so much through the college instructors, as from the experiences in the classrooms. Cooperating teachers indicated that a major strength of the program is the fact that the prospective teachers saw what a classroom was really like, that they had first hand observation of teaching in a New York City school, and that they had many exposures to classroom situations. One suggested that the "actual classroom experience is worth more than tons of lectures and books to read." The principal stated that the prospective teachers were given early contact with disadvantaged pupils, with the community, and with school problems. She also pointed out that teacher training was accomplished in a functional setting. Cooperating teachers suggested that more could be accomplished in these areas if the sophomores were able to spend more time in the classrooms where they could observe and interact to a greater degree.

When asked whether their experiences in District 10 affected their career goals, nine of the sophomores indicated that their career goals had been affected by their experiences while twelve stated that they had not. One prospective teacher indicated that she had had no ambition to teach in a city public school but that through her experiences in P.S. 26 she found that she enjoyed working with the underpriviledged and found it very rewarding. Another said that he had planned to teach secondary school but when the opportunity to take part in this program presented itself he decided to participate. As a result, he has decided to teach in an elementary school. Another stated that she now has become aware of the many problems involved in teaching and how they can be overcome. Still another noted that she had always wanted to teach and now did so even more. As a result of her experiences she would like to get away from the traditional style of teaching the whole class and work in small groups

and have children rather than the lesson the focus of the educational process.

Observation indicated that these sophomores were highly committed to education and very dedicated. They appeared to be benefiting from the earlier exposure to the teaching profession. They had developed a questionning attitude and were in the process of formulating philosophies. During the discussions of their video-taped lessons they exhibited extraordinary insight into problems and offered sound suggestions. The evaluator believes that the program has benefited the participating students. As a result of this program, they now have an extended period of time during which to assimilate the multitude of understandings, knowledge and skills that are necessary in order to develop into effective teachers.

Major Strengths and Weaknesses

The major strength of this program lies in the fact that the college students were given an opportunity, at an early stage in their training, of being in an inner city classroom where they were permitted to work with children. They were able to discover, at first hand, the realities of the classroom and the problems attendant upon working with disadvantaged pupils. It is not surprising that the student teachers and the cooperating teachers agreed that observation and the experiences in the classroom constituted an important factor in attaining the objectives of the program.

The enthusiasm of the student teachers was another potent positive force. There was an evident concern on the part of these prospective teachers to help children.

The major weakness of the program lay in the area of organization. It appeared that the activities that were introduced as a means of attaining the objectives of the program were not thought through well in advance. For example, plans for visiting community agencies were made at the end of the term, with the result that the visit took place the last week of the program while the sophomores were taking final examinations. Not all the students were able to visit the agencies and only twelve were able to attend the follow-up discussion session. Many of those who attended left while the discussion was going on since they had to go back to the University for a final examination. More effective planning and scheduling of activities is crucial in order for the program to be carried out successfully.

The allocation of the time available to the program presented a major problem. All of the persons involved in the program agreed that the college sophomores did not spend enough time in the program. Yet, the college personnel felt that too little time was allocated for instruction in methods, while the coordinator voiced the opinion that there was too much fragmentation in course offerings, and that some subject areas should have been covered in greater depth. The college instructors also noted that they found it difficult to identify with their students because they spent so little time with them during the course of the year; at most, each subject matter specialist met with his students for a total of 14 hours. The cooperating teachers also indicated that they needed more time - to meet with students, to have conferences with college personnel, and to take part in workshops.

The pressures resulting from lack of time also meant that what might have been valuable experiences for the college students could not be organized. No provision was made for the prospective teachers to meet with a psychologist to discuss child behavior in the classroom or with a sociologist to consider the effects of social patterns on the learning style of the children. There was no indication, too, of any attempt to have the schools' guidance counselor take an active role in the program.

While the program coordinator felt that the program had value in leading the prospective teacher to discover the community in which they were working, observation of the program indicated that there was little planning of activities directed to this end. Indeed, there were no planned walks in the neighborhood that might help the college students learn more about the children's environment. One student did indicate that she learned a lot about the disadvantaged child by walking through the neighborhood on her way to lunch. These valuable program experiences should not be left to chance, but should be built into the program planned by the college.

Problems in the area of communication were also evident. Often, cooperating teachers were unsure of their role, and they complained that they found it difficult to arrange for meetings with the college instructors and the coordinator to clarify problems. The college students, too, felt that it was difficult to reach their instructors to discuss program planning and implementation.

B. The Learning Resource Center

The Learning Resource Center is located in an average classroom - size room in the District office. It will soon be overcrowded and there will be a need for more storage area.

Staff

The center is coordinated by an audio-visual specialist with an excellent background in his area. Two educational assistants work in the center. Recently, because of requests from teachers in the district, the hours of operation have been extended from 9:00 A.M. to 5:00 P.M., since teachers found it very difficult to visit the Center during school hours. The Center will also service the district during the summer, even though it will not be funded.

A messenger was to have been on the staff but was not hired.

Materials

The Center contained a wealth of quality materials and equipment. Among the materials were: sound film, 85 per cent of which was in color; filmstrips, audio-video tapes, records with filmstrips, transparancies and transparancy masters, books, flat pictures, charts and kits on various subjects. Among the hardware evident in the Center was a Thermofax Machine, an Off-set press, a viewlex, and a previewer projector and splicing machine which were purchased on the recommendations of teachers using the materials.

Materials at the Center were composed mainly of purchased items. These were rated "good" to "very good" by the evaluator. Teachers appeared to be very pleased with the materials and with the fact that such a Center was now serving them. The following comments are typical:

"Good selection of materials - Have helped in assembly programs."

"Topics are up to date and varied."

"Better and more complete than BAVI."

"Multi-media materials have helped reinforce concepts taught."

"Children enjoy films and most understand them."

"Music materials are received enthusiastically by all."

"Social Studies films have helped brain damaged child."

"The materials are a valuable asset to the learning program."

"The films are of high interest. I am grateful the District is providing them for us, more, more, more.!"

"I like the availability of filmstrips and records."

The teachers were asked to indicate, based on their observations, to what extent their pupils' learnings were influenced by the use of the materials. Although a few teachers responded that the pupils learnings were not affected at all in certain areas, most of the teachers indicated that pupils' learnings were affected either "favorably" or "significantly" in the following areas:

| | |
|---|---|
| Pupil interest and enthusiasm | Retention of learning |
| Attention span | Receptiveness to new learnings |
| Rate of learning | Application of new ideas |
| Comprehension | Motivation to learn more |
| Pupil participation | Improved attitude about learning |

Analysis of records indicated that 2800 request orders had been made through April. Provisions had been made in some schools for pick up and delivery.

Many of the teachers found it difficult to visit the Center because of distance or lack of time. Analysis of the Visitor's Book revealed that teachers, assistant principals, principals, and coordinators visited the Center. Numbers ranged from ten to twenty each day. When the observer was at the Center, there was always either a teacher or assistant principal either looking through materials or picking up materials.

The sophomores involved in the teacher training component of the program visited the Center once; a few had made requests for material.

The Center was used by teachers mainly for acquiring materials such as sound films, filmstrips, records, charts, and kits. Teachers did not use the Center to any great extent for preparing their own curriculum materials. It should be noted that the Center is still in the process of development - the staff is involved primarily in evaluating, ordering, and distributing materials; in addition, teachers do not have the time during school hours to go to the Center to prepare materials. Next year, with the implementation of longer hours, it is anticipated that more teachers will use the Center for this purpose.

Some problems were apparent in utilization of materials available from the Center. Some difficulties that were noted, however, did not stem from the Center, but could be attributed to the schools that were serviced. Many teachers reported that they could not avail themselves of Center materials because the projector or phonograph in their schools was in need of repair. Several complained that films that arrived were in need

of rewinding, or broken. This, of course, should have been checked at the Center, but this would place a burden on the small staff.

Other difficulties noted by the users of materials stem from the newness of the program. Some teachers indicated that the loan period (10 days) was too short; others observed that not enough materials were available at one time. As the Center develops duplicate materials, it will become possible to extend the loan period and to offer a wider range of materials.

Appropriateness of material is another factor affecting utilization. Some teachers evidently were unsure of the appropriateness of materials for their grade levels and teaching purposes. During the year the Center published a bulletin listing the materials, subject area, content, grade level, and a short annotation. This bulletin was revised, based on recommendations from the teachers, and supplements issued twice during the year. A new improved bulletin is being developed at the present.

The system developed at the Center for having teachers evaluate the materials they have used will have an effect on utilization. After they have used an item, the teachers completed an evaluation card. With these evaluation forms as guides, the staff determines whether to retain the materials, discard them, return them to the publisher if on approval, or order duplicate copies when deemed necessary.

Strengths and Weaknesses of the Program

The Center has had a very positive impact on the professional staff in the District. Teachers and supervisors recognize the Center as an asset, and were grateful that the service was provided.

Analysis of letters from principals, assistant principals, audio-visual coordinators and teachers in the schools revealed that they all welcomed the Center and hoped that it would expand. Comments included,

"I believe in your project. The choice and range of the multi-media materials demonstrated the vast amount of planning that went into the creation of the Center. We have found a wonderful response by teachers and pupils." "The Resource Center has been a welcomed addition to our curriculum. It should be expanded to serve our ever increasing educational needs."

The continuous process of evaluation instituted by the program co-ordinator may also be deemed a major strength. He arranged for distribution of questionnaires to the schools in the District, analyzed the results and based on this analysis, made immediate revisions in procedures. Catalogues were revised numerous times, a preview projector was made available, films were repaired, and a start was made in repairing equipment in the schools. Teachers were asked to evaluate materials they had used with their class. A form was completed by the teacher after she used the material. The educational assistants kept a book indicating their responses and reevaluated their stock on this basis. Duplicate materials were ordered where demands were numerous.

Record-keeping (requests for materials, evaluations of materials, purchase orders, etc.) was extremely efficient. The assistants charged with responsibilities in these areas were interested, even enthusiastic, in doing a good job. Problems seemed to be anticipated; if not, they were remedied as soon as they were called to their attention.

The major weakness of the program, and one which apparently influenced the extent to which materials were used, was the lack of a messenger service. Some teachers, too, were unaware of the existence of the Center.

It was evident that the major function at this time was to acquire and distribute commercially prepared materials to the teachers in the district. Little emphasis was placed on working with teachers in developing high impact curriculum materials. The program proposal stated that the program was to involve the actual participation of teachers and pupils working together to create and use instructional materials of an innovative and experimental nature. This objective was not met.

There was little evidence of a joint venture by District 10 and Lehman College in the development or implementation of the Center, except for the video-tapes of lessons which were provided by the teacher training program and housed by the Center. There appeared to be no exchange of ideas or talents in the development of curriculum materials.

## VI. RECOMMENDATIONS

### A. Teacher Training Component

The Teacher Training Component of the Developmental Program is a worthwhile innovative program that merits recycling, with major changes in emphasis. The following suggestions are offered with a view toward program improvement:

1. The program should be looked upon not as one to be completed in a single year, but in terms of a three year span. The objectives of this three year program in the development of a prospective teacher should be carefully formulated in behavioral terms, and activities directed to the attainment of these objectives specified for each of the six semesters comprising the three year span.

2. Considerable time should be spent in planning the specific activities to be utilized in the year that the prospective teachers are assigned to schools in the District. This planning should involve college personnel and the supervisors and cooperating teachers in the schools.

3. It is important that such activities as are undertaken be sequential in nature; care must also be taken not to overwhelm the prospective teacher with too wide a range of activities at the expense of depth of understanding.

4. To this end, it is suggested that emphasis during the sophomore year be placed on the development of understandings of the disadvantaged child and on the use of appropriate methods and techniques for reaching him in the classroom.

5. Opportunities should be provided for directed classroom observations by small groups of prospective teachers, under the guidance of a college instructor who has a background in psychology or sociology, in order to analyze and discuss specific behaviors of disadvantaged pupils in a learning - teaching situation.

6. All activities should be planned well in advance, and scheduled into the students' programs. There should be a minimum of changes in schedules.

7. The role of the cooperating teacher and of the prospective teacher or teachers assigned to her class should be clearly defined.

8. The use of the videotape as a means of self-evaluation should be reconsidered; it appears that its use in this fashion so early in the training of the prospective teacher is premature, and that videotaping may be a more effective device for other purposes.

B. Learning Resource Center

The Learning Resource Center component of the Developmental Program has amply demonstrated its effectiveness, and will merit recycling. The following suggestions are submitted for consideration.

1. Greater emphasis should be given to the designing and preparation of high impact curriculum materials by the Center and by the teachers in the District.

2. All teachers in the schools should be made aware of the Learning Resource Center.

3. A truly joint venture should be undertaken by the District and Lehman College in developing curriculum materials for use by the Learning Resource Center.

4. It is imperative that a messenger be hired to transport materials to and from the schools.

5. It would be advisable to employ a technician to assist teachers in the use of equipment and to repair equipment.

6. There is a need for a training program for teachers in the use of audio-visual materials and equipment; this may well be undertaken through the Learning Resource Center.